

Operator's manual



TruTool F 301 (2A5)

Seam locker

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1. Safety

1.1 General safety information

 **WARNING**

Read all warnings and instructions.

- Failure to follow the warnings and instructions may result in electric shock, fire, and/or serious injuries.
- Keep 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 shears

 **WARNING**

Risk of injury to hands.

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

2. Description

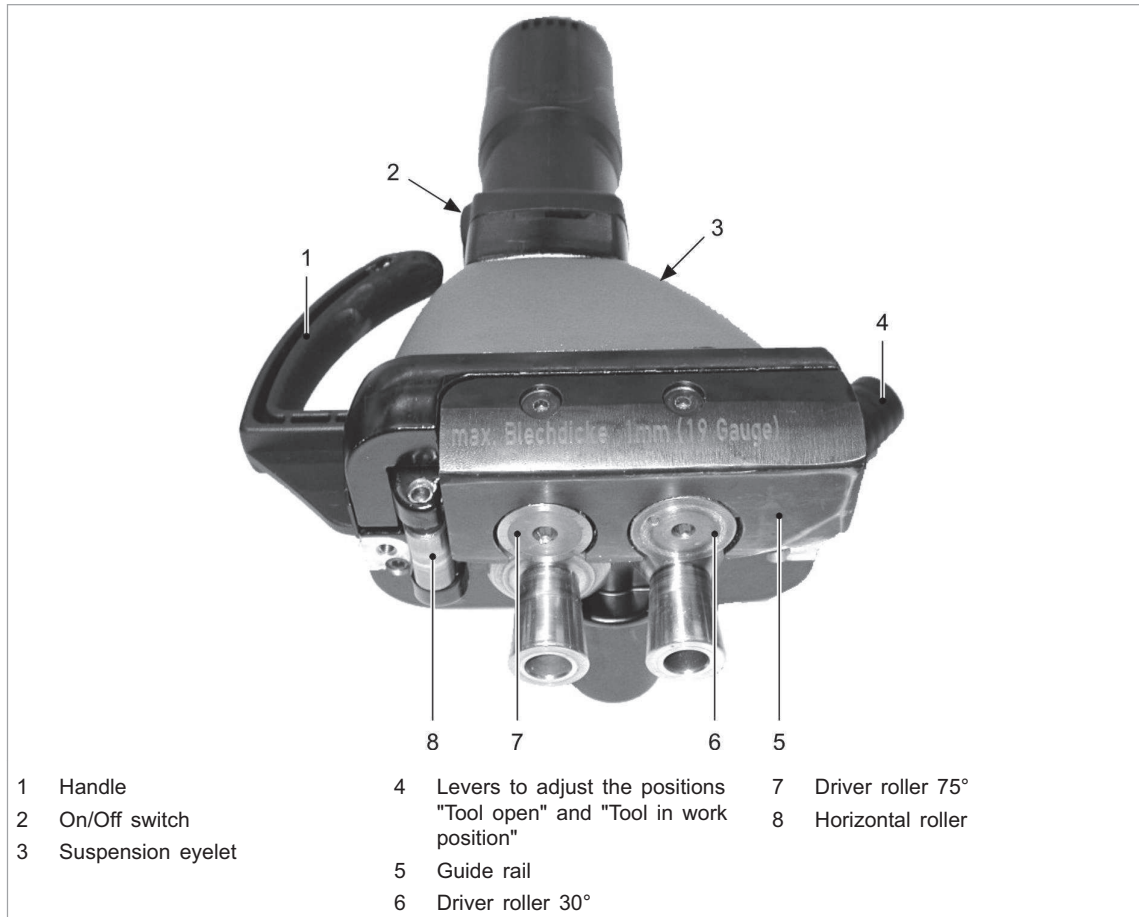


Fig. 87849

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 seam locker TruTool F 301 is a manually operated battery-powered tool for the following applications:

- The closing of Pittsburgh lock seams on correspondingly pre-machined workpieces such as ventilation channels, housings, containers etc.
- The machining of all lock seam heights.

Notes

- The seam can be closed on straight or curved contours.
- The machine will automatically adapt to the thickness of the current sheet.

2.2 Technical data

	Other countries	USA
Voltage	18 V	18 V
Working Speed	4 - 7 m/min	13 - 23 ft/min
Speed when idling n_0	90/min	
Weight	5.3 kg	11.39 lbs

Tab. 1


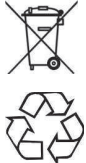

Acceptable material thickness	
	TruTool F 301
Steel up to 400 N/mm²	0.45 - 1 mm 0.018 - 0.039 in 26 - 19 gauge
Inner radii	min. 150 mm min. 5.9 in
Outer radii	min. 300 mm min. 11.8 in



Tab. 2

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
	Information symbol	Do not throw batteries into fire.

Icon	Name	Description
	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. 3

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.
- 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	< 2.5
Uncertainty K for vibration emission value	m/s^2	1.5
A-class acoustic pressure level L_{PA} typically	dB (A)	80
A-class acoustic power level L_{WA} typically	dB (A)	91
Uncertainty K for noise emission value	dB	3

Tab. 4

3. Folding

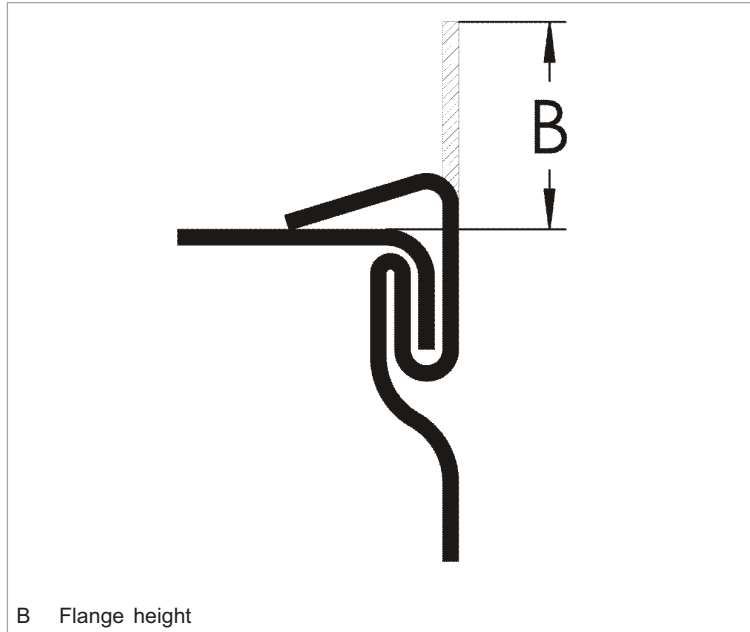


Fig. 47283

Lock seam geometry "Pittsburgh lock seam"

Sheet thickness range mm	B mm
0.45 - 1.0	8 - 11

Tab. 5

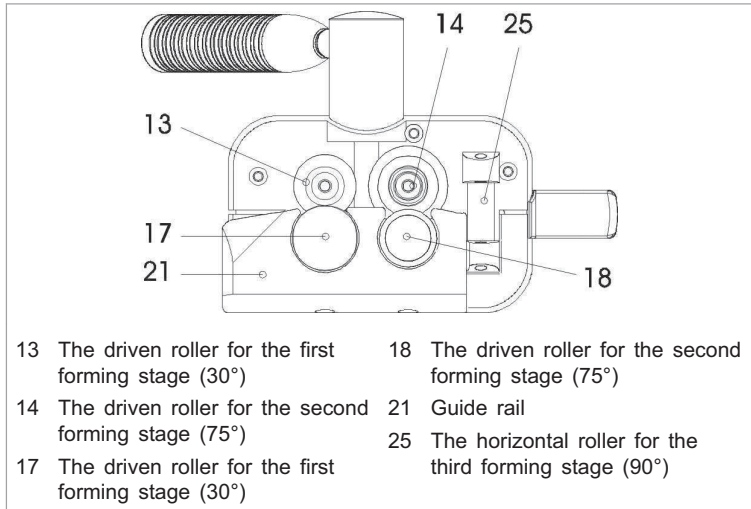
Sheet thickness range		B
in	Gauge	in
0.02 - 0.04	26 - 19	0.31 - 0.43

Tab. 6

Note

The seam quality essentially depends upon the flange height B. If B is too small, the seam cannot be properly closed. If the Pittsburgh lock seam machine is set to a sheet thickness of 1.25 mm, then the correct flange height B will automatically result for all thin sheets.

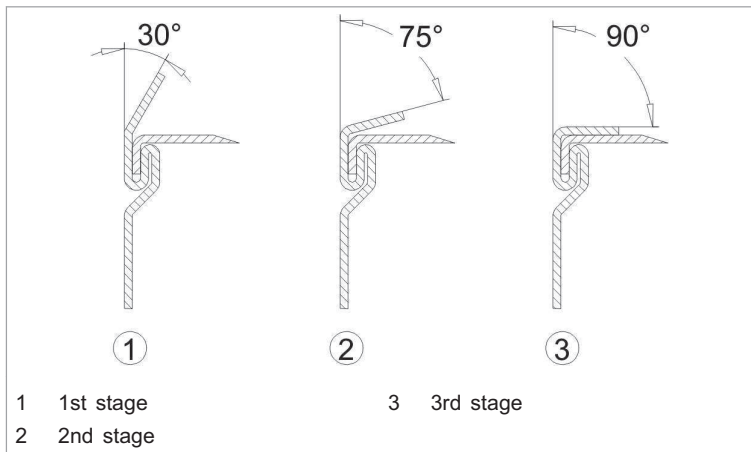
Roller arrangement



View of the machine from below: the roller arrangement

Fig. 18181

The sequence of the folding process



The folding process

Fig. 13416

Note

The flange is formed in 3 stages.

4. Setting work

4.1 Adjusting the tool

To be able to apply the machine to the required place on the channel or to be able to remove it at the end of the channel, the spacing between the rollers and the guide rail can be locked in 2 positions.

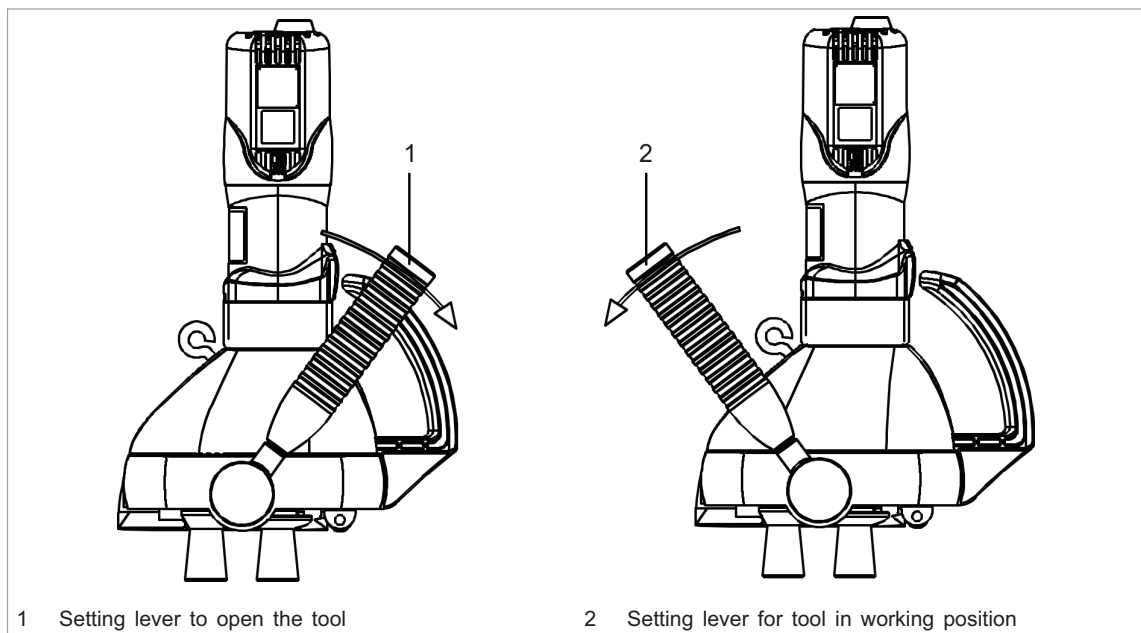


Fig. 69988

Note

It is not necessary to adjust for the thickness of the sheet, as the machine adjusts itself automatically.

- Press the clamping lever (1) into position in the direction opposite to the feed direction.

The tool is open.

or

- Press the clamping lever (2) into its end position in the feed direction.

The tool is in its working position.

5. 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.
-

5.1 Working with TruTool F 301

Depending on the type of channel to be machined, there are 2 options when starting work:

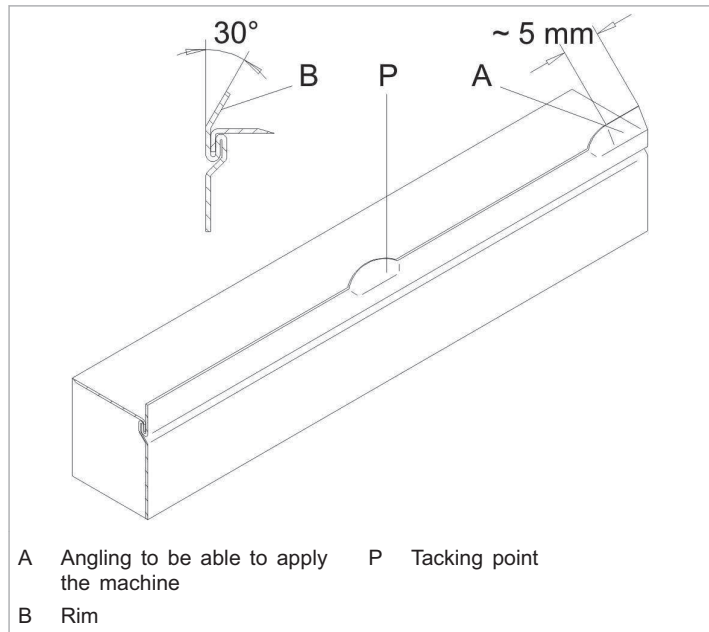
- The channel is open.
- There is a flange at the start of the channel.

Switching on

- Slide the On/Off switch down.

The channel is open

To improve the results, lightly oil the rollers or the sheet with universal oil (order number 138648).



Seam preparation

Fig. 13411

1. Angle the flange to approx. 30° at the start of the channel for a length of approx. 5 mm.

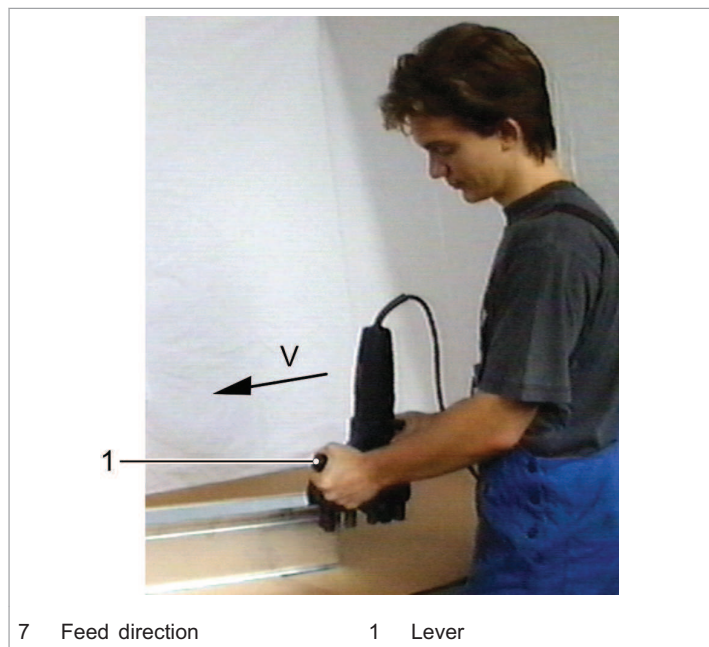


Fig. 13415

2. Put the lever (1) into its end position in the feed direction (tool in its working position).
3. Switch on the machine and apply it to the start of the channel.

Tip

The curved guide rail ensures that the machine can easily be applied when starting machining.

4. The drive rollers pull the machine in the feed direction, i.e. the seam is closed.

There is a flange at the start of the channel.

The machine cannot be applied at the start of the channel. Preparation of the channel so that the machine can be applied.

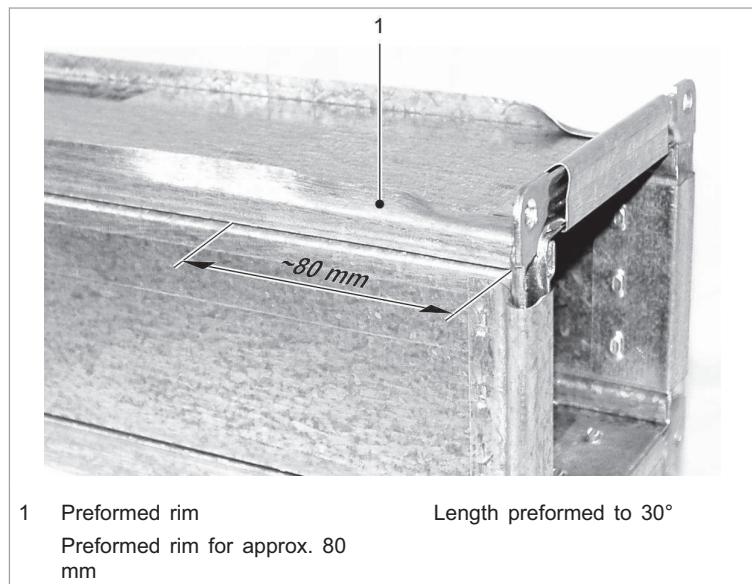


Fig. 18183

1. Put the lever (1, (see "Fig. 13415", pg. 13)) into the position opposing the feed direction (tool open).
2. Apply the machine to the required (prepared) position on the channel.
3. Put the lever (1) into the feed direction (tool in its working position).

The machine's working direction (feed direction) is determined by its design.

4. Switch on the machine.
5. Close the seam.
6. Put the lever (1,) into the tool open position.

Note

At the end of the channel, a small amount of manual follow-up work will be needed at the end of the channel after using the seam locker (for a length of approx. 130 mm).

7. Switch the machine off and remove the tool from the channel.

Switching off

- Slide the On/Off switch upwards.

6. Maintenance

⚠ 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 point	Procedure and interval	Recommended lubricants	Lubricant Order No.
The machine's guide rails Guide rail and drive pinion	Every 10 operating hours, a technician should clean with a wire brush	Universal oil -	138648 -
Gearbox and gear head	After 300 operating hours, arrange for a technician to add grease or to replace the lubricating grease	Lubricating grease "G5"	1954202
Ventilation slots	Clean as needed	-	-

Maintenance positions and maintenance intervals

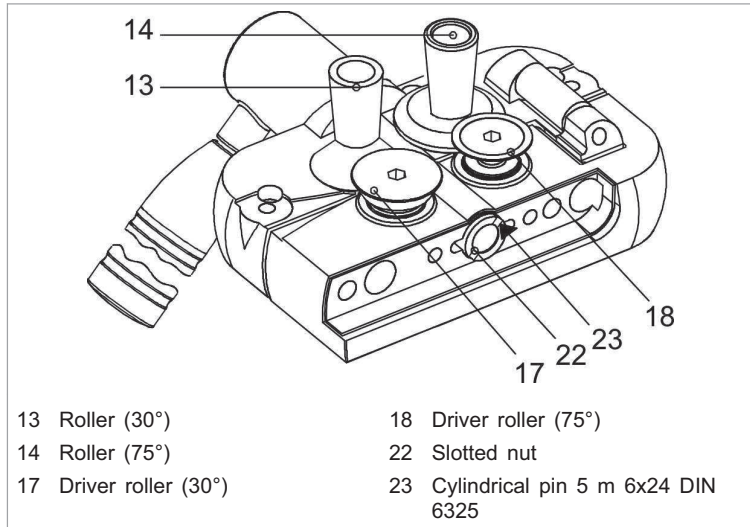
Tab. 7

6.1 Tighten the screws to a torque

Components	Torque	Thread lock
30° roller	24 Nm	Loctite 262
75° roller	24 Nm	Loctite 262
Driver roller (30°)	24 Nm	-
Driver roller (75°)	24 Nm	-
Slotted nut	6 Nm ¹	Loctite 262
Cylindrical pin 5 m 6x24 DIN 6325	-	-

Tab. 8

¹ The locking mechanism must be closed (special wrench order no. 922759)



View of the seam locker from below, the guide rail has been removed Fig. 14423

1. Tighten the screws and nuts with the correct torque, if parts of the machine have been removed.
2. Secure with Loctite 262.

6.2 Checking loading status

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

Tab. 9

- Switch on the machine.
The lamp which shows the loading status illuminates for 5 seconds.

6.3 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.



7. Accessories and consumables

Consumables	Quantity	Order number	Scope of delivery
Guide rail	1 piece	0920881	x
Driver roller 30°	1 piece	0145769	x
Driver roller 75°	1 piece	0135478	x
Roller (horizontal)	1 piece	0135791	x
Standard parts Set F 30x	1 piece	1498764	-

TruTool F 301

Tab. 10

Accessories	Quantity	Order number	Scope of delivery
TRUMPF Box M3	1 piece	1770951	x
TRUMPF Box S301 lining	1 piece	1771100	x
Safety information EW	1 piece	0125699	x
Operator's manual, TruTool F 301	1 piece	2082093	x
Universal oil, 100 ml	1 piece	0138648	-
Screwdriver DIN 911 AF 4	1 piece	0067849	-

TruTool F 301

Tab. 11

Consumables rechargeable battery	Order number	Scope of delivery
TRUMPF 10.8 V 2.0 Ah	2272664	x ²
TRUMPF 10.8 V 4.0 Ah	2272665	-
Recharger 100 - 240 V, 50/60 Hz (D)	2272666	x ²
Recharger 100 - 240 V, 50/60 Hz (GB)	2275871	x ²
Recharger 100 - 240 V, 50/60 Hz (USA)	2275872	x ²

Tab. 12

7.1 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:

2 Depending on the type of machine ordered



-
- 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.

8. Appendix: Declaration of conformity, guarantee, replacement parts lists



Operator's manual



Recharger

TRUMPF Werkzeugmaschinen GmbH + Co. KG, Technische Redaktion
Johann-Maus-Straße 2, D-71254 Ditzingen
Fon: +49 7156 303 - 0
Internet: <http://www.trumpf.com>
E-Mail: docu.tw@de.trumpf.com



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1. Safety

1.1 General safety information

 **WARNING**

Read all warnings and instructions.

- Failure to follow the warnings and instructions may result in electric shock, fire, and/or serious injuries.
- Keep 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 2272664).
- TRUMPF rechargeable battery Li-ion 4.0 Ah (order number 2272665).

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.

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. 1

5. Accessories and consumables

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.

