

# Operator's manual



## TruTool N 160 (1A1)

Nibbler

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**TRUMPF**





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## 1. Safety

### 1.1 General safety information

 **WARNING**

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**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.
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### 1.2 Specific safety information for nibblers

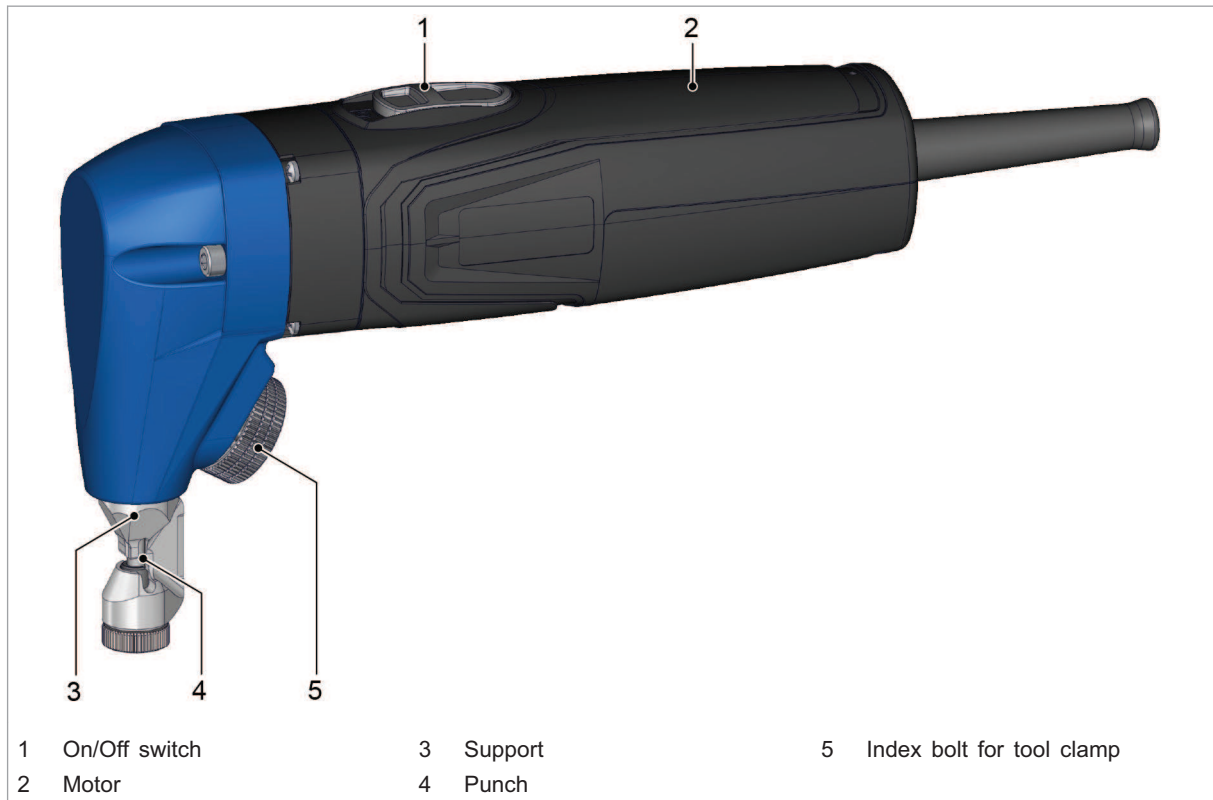
 **WARNING**

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**Risk of injury to hands.**

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

## 2. Description



TruTool N 160 profiling nibbler

Fig. 99444

### 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 profiling nibbler TruTool N 160 is a hand-held power tool for the following applications:

- For slitting sectional sheets such as trapezoidal sheet, corrugated sheet, boxed sheet, offset profiled strips.
- Slitting plate-shaped workpieces made of a punchable material such as steel, aluminum, non-ferrous heavy metals and plastic.
- Nibbling straight or curved exterior and interior cutouts.
- For nibbling from scribed lines.

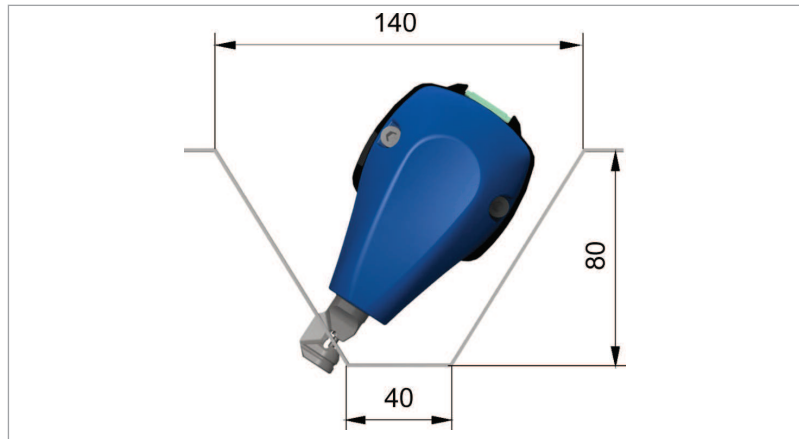


Fig. 52873

## 2.2 Technical data




|  | Other countries        |           | USA         |
|--|------------------------|-----------|-------------|
| <b>Voltage</b>   | 230 V<br>220 V (China) | 110 V     | 120 V       |
| <b>Frequency</b>   | 50 Hz                  | 50 Hz     | 50/60 Hz    |
| <b>Permissible material thickness:<br/>steel up to 400 N/mm<sup>2</sup></b>    | 1.6 mm                 |           | 0.063 in    |
| <b>Permissible material thickness:<br/>steel up to 600 N/mm<sup>2</sup></b>    | 1.0 mm                 |           | 0.039 in    |
| <b>Permissible material thickness:<br/>steel up to 800 N/mm<sup>2</sup></b>    | 0.7 mm                 |           | 0.03 in     |
| <b>Permissible material thickness:<br/>aluminum up to 250 N/mm<sup>2</sup></b> | 2.0 mm                 |           | 0.078 in    |
| <b>Working Speed</b>   | 2.4 m/min              | 2.1 m/min | 7.87 ft/min |
| <b>Smallest radius</b>   | 24 mm                  |           | 0.94 in     |
| <b>Starting hole diameter</b>  | 22 mm                  |           | 0.87 in     |
| <b>Diameter of smallest hole that can be cut</b>                               | 48 mm                  |           | 1.89 in     |
| <b>Clearance for template cutting</b>  | 1.5 mm                 |           | 0.06 in     |
| <b>Nominal power consumption</b>   | 350 W                  | 350 W     | 350 W       |
| <b>Idle stroke rate</b>  | 3050/min               | 2890/min  | 3050/min    |
| <b>Stroke rate with nominal load</b>   | 2070/min               | 1810/min  | 2070/min    |
| <b>Weight without cable</b>  | 1.5 kg                 |           | 3.31 lbs    |
| <b>Weight with cable</b>   | 2.3 kg                 |           | 5.07 lbs    |
| <b>Weight of extension</b>   | 0.2 kg                 |           | 0.44 lbs    |

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   |
| 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  |
| $n_o$   | 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

### 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) | $m/s^2$ | 12.2                        |
| Uncertainty K for vibration emission value                      | $m/s^2$ | 1.7                         |
| A-class acoustic pressure level $L_{pA}$ typically              | dB (A)  | 75                          |
| A-class acoustic power level $L_{WA}$ typically                 | dB (A)  | 86                          |
| Uncertainty K for noise emission value                          | dB      | 3                           |

Tab. 3



### 3. Setting work

#### 3.1 Chip bag (optional)

A chip bag can be used to catch the chips.



TruTool N 160 with chip bag

Fig. 97973

## 4. Operation

### WARNING

#### Damage to the machine due to improper handling.

- Do not carry the machine by the cable.
- Maintenance may be carried out by trained specialist technicians only.

### 4.1 Switching TruTool on/off

**Switching on the machine** 1. Slide the On/Off switch forwards.

**Switching off the machine** 2. Slide the On/Off switch to the rear.

### 4.2 Working with TruTool N 160

#### Note

In order to improve the cutting result and increase the service life of the punch, coat the cutting track with oil before machining the workpiece.

| Material | Oil  |
|----------|--|
| Steel    | Punching and nibbling oil (0.5 l, order number 103387) |
| Aluminum | Wisura oil (1 l, order no. 125874)                     |

Tab. 4

#### Note

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

1. Edit material.
  - Process the desired cutting line.
2. If the cutting track ends in the sheet: retract the running machine a few millimeters in the direction of the already free-cut cutting track.
3. Switch the machine off.

### 4.3 Changing the cutting direction

The direction of the cut can be rotated to the right or the left in 8 indexed positions (all 45°) or rotated freely as needed.

- Set the tool for right-hand/left-hand operation.
- Process profile sheets.



Fig. 97974

1. Loosen the knurled wheel for the tool clamp.
2. Turn the tool in the desired direction.
3. Retighten the knurled wheel.

### 4.4 Producing interior cutouts

- Make a start bore of at least  $\varnothing$  15 mm.

## 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.
- 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 circuit breaker with a maximum breaking current of 30 mA when using the power tool outside.
- Only use original TRUMPF accessories.
- If the connection line has to be replaced, this may only be done by the manufacturer or representative to avoid safety hazards.  
(Connection type Y in accordance with DIN EN 60335-1 3.2.5)

### 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 tool hourly for wear. A sharp tool provides good cutting performance and is easier on the machine.
- Change blades in a timely manner.

| Maintenance point     | Procedure and interval  | Recommended lubricants  |
|-----------------------|---|-------------------------|
| Punch                 | Change as needed  | -                       |
| Ventilation slots     | Clean as needed   | -                       |
| Carrier               | Change if needed / lubricate after tool change  | Lubricating grease "G1" |
| Gearbox and gear head | Every 300 operating hours, have a trained specialist relubricate or replace the lubricating grease. | Lubricating grease "G5" |

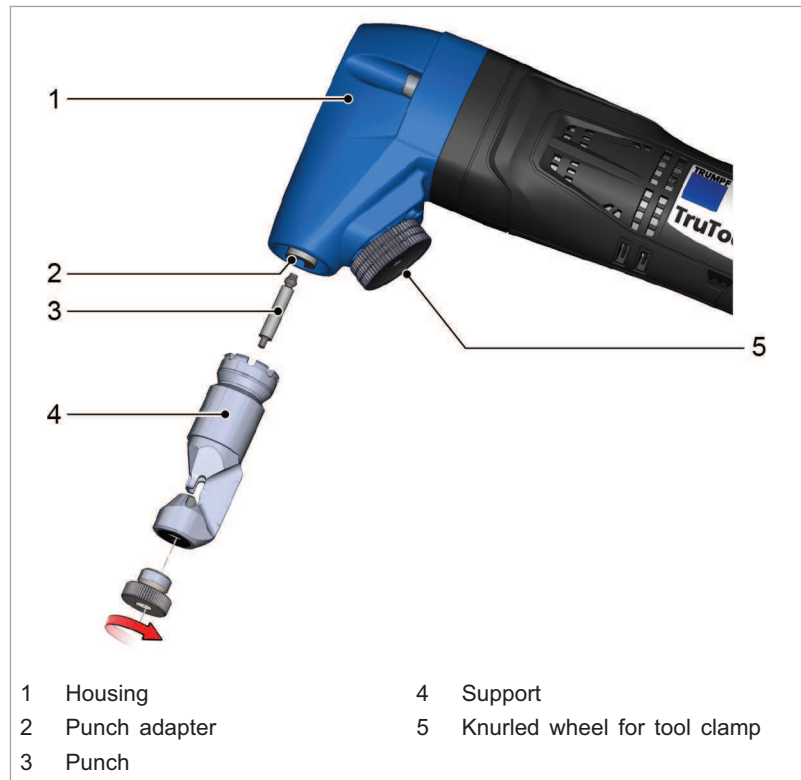
Maintenance positions and maintenance intervals

Tab. 5

## 5.1 Replacing the tool

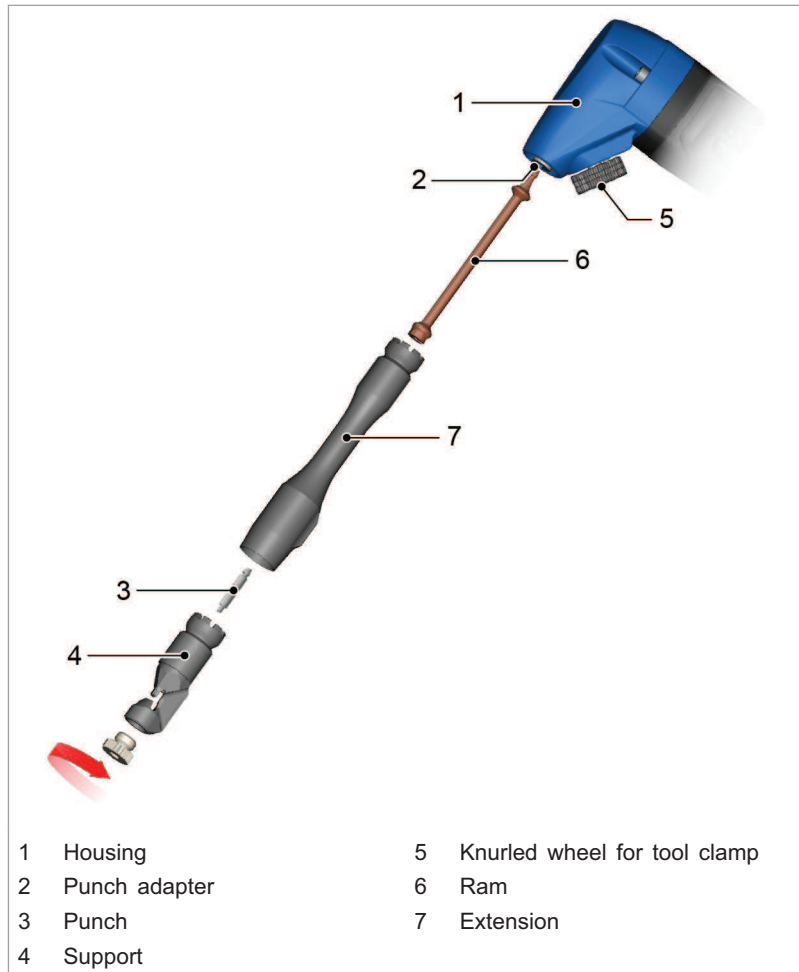
### Note

A blunt punch can cause the carrier to break.



Replacing the tool

Fig. 97975



Replacing the tool

Fig. 99455

- Change the punch and/or the carrier.

## 5.2 Mounting the extension

### Note

During assembly, it is best to hold the machine horizontally.

1. Turn the knurled wheel (5) at least three times.

### Index bolt stuck

- Use T20 wrench.
2. Pull the carriers (4) out of the housing (1).
  3. Remove the punch (3).
  4. Hang the ram (6) in keyway of the punch adapter (2).
  5. Insert the extension (7) in the housing.

6. Hang the punch in the keyway of the extension.
7. Insert the carrier in the extension.
8. Tighten lever by hand.

### 5.3 Changing the punch

#### Note

During assembly, it is best to hold the machine horizontally.

1. Turn the lever (5) at least three times.

#### Index bolt stuck

- Use T20 wrench.

2. Pull the carries (4) out of the housing (1).
3. Remove the punch (3).
4. Lubricate the new punch (3) and carrier (4) with "G1" lubricating grease.
5. Hang the punch (3) in die keyway of the punch adapter (2).
6. Insert the carrier (4) in the housing (1).
7. Tighten the lever (5) by hand.

### 5.4 Changing the die

#### Note

During assembly, it is best to hold the machine horizontally.

1. Undo nut (x).

#### Nut stuck

- Use T20 wrench.

2. Remove die (x) and insert new die.
3. Tighten nut (x) by hand.

### 5.5 Changing the carrier

#### Note

During assembly, it is best to hold the machine horizontally.

- 
1. Turn the lever (5) at least three times.
  2. Remove the carrier (4)
  3. Insert a new carrier (4) in the housing (1).
  4. Tighten the lever (5).



## 6. Accessories and consumables

| Name   | Scope of delivery | Consumables | Accessories | Order number |
|--|-------------------|-------------|-------------|--------------|
| Punch (1-piece set)                          | -                 | x           | -           | 2260177      |
| Punch (5-piece set)                          | -                 | x           | -           | 1264083      |
| Punch (10-piece set)                         | -                 | x           | -           | 1264084      |
| Die (1-piece set)                            | -                 | x           | -           | 2260178      |
| Die (2-piece set)                            | -                 | x           | -           | 2260560      |
| Die (5-piece set)                            | -                 | x           | -           | 1264088      |
| Set (2 punches, 1 die)                       | -                 | x           | -           | 0141723      |
| Lubricating grease "G1" tube (25 g)          | -                 | x           | -           | 0344969      |
| Lubricating grease "G5" can (900 g)          | -                 | x           | -           | 1954202      |
| Punching and nibbling oil for steel (0.5 l)  | -                 | -           | x           | 0103387      |
| Punching and nibbling oil for aluminum (1 l) | -                 | -           | x           | 0125874      |
| TRUMPF Box S1                                | x                 | -           | x           | 1763681      |
| Chip bag                                     | -                 | -           | x           | 2498167      |
| Operator's manual                            | x                 | -           | -           | 2498060      |
| Safety notes                                 | x                 | -           | -           | 0125699      |

Tab. 6

### 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](http://www.trumpf-powertools.com).

4. Send the order to the TRUMPF representative office.

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