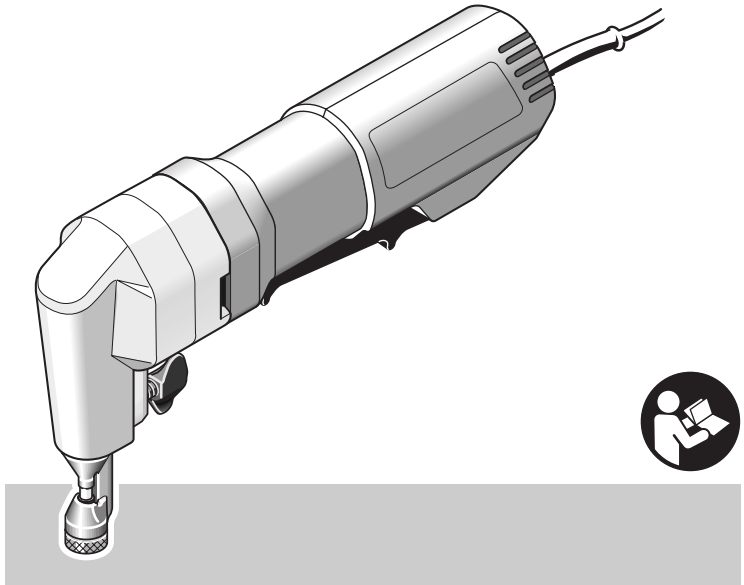
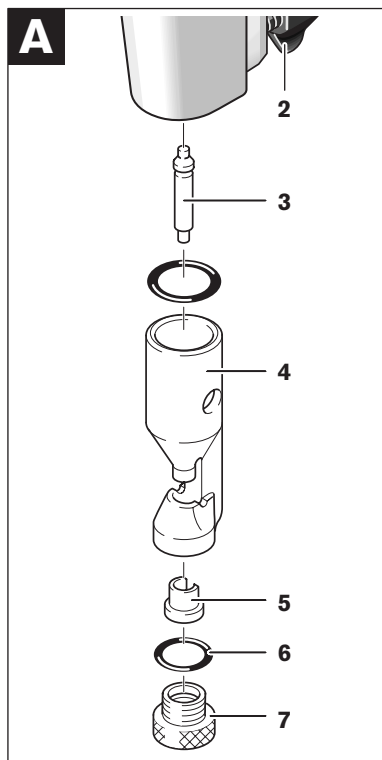
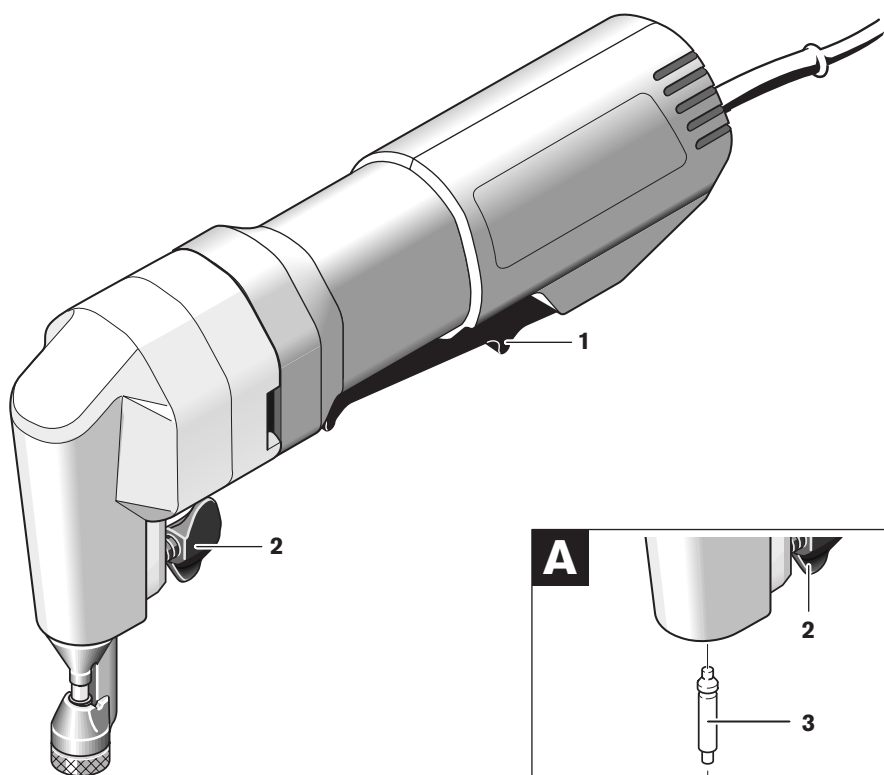


TruTool N 160 E



- | | |
|--|--|
| de Originalbetriebsanleitung | hu Eredeti használati utasítás |
| en Original instructions | ru Оригинальное руководство по эксплуатации |
| fr Notice originale | ro Instrucțiuni originale |
| es Manual original | bg Оригинална инструкция |
| pt Manual original | sr Originalno uputstvo za rad |
| it Istruzioni originali | sl Izvirna navodila |
| nl Oorspronkelijke gebruiksaanwijzing | hr Originalne upute za rad |
| da Original brugsanvisning | et Algupärane kasutusjuhend |
| sv Bruksanvisning i original | lv Instrukcijas oriģinālvalodā |
| fi Alkuperäiset ohjeet | lt Originali instrukcija |
| el Πρωτότυπο οδηγίων χρήσης | ja オリジナル取扱説明書 |
| tr Orijinal işletme talimatı | |
| pl Instrukcja oryginalna | |
| cs Původní návod k používání | |
| sk Pôvodný návod na použitie | |

TRUMPF



Safety Notes

Safety Warnings for Nibblers



Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

- ▶ **Additionally, the general safety warnings either in the enclosed leaflet or in the centre of these operating instructions must also be followed.**
- ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
- ▶ **Always wait until the machine has come to a complete stop before placing it down.** The tool insert can jam and lead to loss of control over the power tool.
- ▶ **Never use the machine with a damaged cable. Do not touch the damaged cable and pull the mains plug when the cable is damaged while working.** Damaged cables increase the risk of an electric shock.
- ▶ **Products sold in GB only:** Your product is fitted with an BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362). If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.
The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.
Products sold in AUS and NZ only: Use a residual current device (RCD) with a rated residual current of 30 mA or less.

Functional Description

While reading the operating instructions, unfold the graphics page for the machine and leave it open.

Intended Use

The machine is intended for cutting sheet metal without deforming the material and is suitable for straight cuts, cut-outs and narrow curves.

Product Features

The numbering of the product features refers to the illustration of the machine on the graphics page.

- 1 On/Off switch
- 2 Die holder screw
- 3 Punch
- 4 Die holder
- 5 Die
- 6 Rubber ring for knurled screw
- 7 Knurled screw for die

Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.

Technical Data

Nibbler		TruTool N 160 E
Rated power input	W	350
Output power	W	160
Stroke rate at no load n_0	min^{-1}	2 200
Stroke speed under load	min^{-1}	1 600
Max. steel sheet cutting capacity*	mm	1.6
Cutting width	mm	5
Smallest curve radius	mm	40
Weight according to EPTA-Procedure 01/2003	kg	1.7
Protection class		□/II

* to 400 N/mm² with reference to steel sheet
The values given are valid for a nominal voltage [U] of 230 V. For different voltages and models for specific countries, these values can vary.

Noise/Vibration Information

Measured sound values determined according to EN 60745.

Typically the A-weighted sound pressure level of the product is 79 dB(A). Uncertainty K=3 dB.

The noise level when working can exceed 80 dB(A).

Wear hearing protection!

Vibration total values (triax vector sum) determined according to EN 60745:

Vibration emission value $a_h = 9 \text{ m/s}^2$, Uncertainty $K < 3 \text{ m/s}^2$.

The vibration emission level given in this information sheet has been measured in accordance with a standardised test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.

The declared vibration emission level represents the main applications of the tool. However if the tool is

used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

Declaration of Conformity

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with the following standards or standardization documents: EN 60745 according to the provisions of the directives 2004/108/EC, 2006/42/EC.

Technical file at:

Friedrich Kilian

Geschäftsführer Entwicklung



TRUMPF Werkzeugmaschinen GmbH + Co. KG
D-71254 Ditzingen
Ditzingen, 29.01.2010

Operation

Starting Operation

- ▶ **Observe correct mains voltage! The voltage of the power source must agree with the voltage specified on the nameplate of the machine. Power tools marked with 230 V can also be operated with 220 V.**

Switching On and Off

To **start** the machine, press the On/Off switch **1**.

For **locking** the On/Off switch **1** hold it down and push it back.

To **switch off** the machine, release the On/Off switch **1**. When the On/Off switch **1** is locked, press it first and then release it.

Changing the Cutting Direction

For changing the cutting direction, the die holder **4** can be turned to three positions, each offset by 90°. Cutting toward the rear (toward the housing of the machine) is not possible.

For turning the die holder **4** loosen the screw **2** until you can turn the die holder. Turn it 90° to the right or the left in relation to the longitudinal axle of the power tool.

Make sure that the screw **2** engages into the borehole of the die holder **4**. Tighten the screw **2**.

Working Advice

- ▶ **The power tool is not suitable for stationary operation.** For example, it may not be clamped in a vice or fastened on a workbench.
- ▶ **Wear protective gloves while working and pay particular attention to the mains cable.** Sharp burrs develop at the cut steel sheet and can cause injuries to the operator or damage the mains cable.
- ▶ **Exercise caution when handling the cutting chips.** The chips have sharp tips that can cause injuries.

Apply the machine to the workpiece only when switched on. Always hold the machine vertical to the surface of the steel sheet and do not tilt it.

The cut takes place during the downward motion of the punch. Guide the machine evenly and with moderate feed in the cutting direction. A high feed rate significantly reduces the service life of the cutting tools and can damage the machine.

The machine operates more quietly when it is raised slightly during cutting. If the punch should become wedged during cutting, switch the machine off, relubricate the punch and release the tension of the steel sheet. Do not exert force, otherwise the punch and the die will become damaged.

Maximum Steel Sheet Cutting Capacity

The maximum steel sheet cutting capacity d_{\max} depends on the strength properties of the material to be cut.

The machine allows for straight and deformation-free cutting of metal sheets to the following thicknesses:

Material	Max. strength property [N/mm ²]	d_{\max} [mm]
Steel	400	1.6
	600	1.0
	800	0.7
Aluminium	200	2.0

Lubricating/Cooling the Punch

To extend the service life of the punch **3**, a lubricating agent with good cooling properties (e.g. cutting oil) should be used.

Apply a trail of lubricant beads onto the top side of the metal sheet alongside the intended cutting line. For long periods of continual use or for work with high frictional wear (e.g. when cutting aluminium), the cutting head should be immersed into a container with lubricant in regular intervals.

Cutting along a Cutting Mark or with a Guide

Straight cuts are carried out easier when the machine is guided alongside a rule.

Contours can be cut by guiding the machine along a template.

For inside cuts, pre-drilling a hole with a diameter of 21 mm is necessary.

Maintenance and Service

Maintenance and Cleaning

- ▶ **Before any work on the machine itself, pull the mains plug.**
- ▶ **For safe and proper working, always keep the machine and ventilation slots clean.**

Clean and lubricate the punch **3** and die **5** every 3 operating hours.

Change the punch and die in good time when worn. Only sharp tools produce a good cutting quality and make the machine last longer.

The punch **3** and the die **5** may not be reground.

Changing the Die

Unscrew the knurled screw **7** of the die holder **4**. Take out the die **5**.

If necessary, clean the die holder **4**.

Put a new, well greased die **5** into the die holder. Pay attention to the alignment of the flat side.

Tighten the knurled screw **7** again, the rubber ring placed onto it **6**. Tighten the screw against the resistance of the rubber ring.

Changing the Punch

Loosen the screw **2** and pull the die holder und **4** completely out of the housing.

Push the punch **3** laterally out of the slot in the die holder **4** and pull it down and out.

Place a new, well greased punch **3** into the slot in the die holder **4** and align it centrally.

Push the die holder **4** with caution over the punch **3** back into the housing. Turn the die holder into one of the three possible positions (see "Changing the Cutting Direction", page 8). Tighten the screw **2**.

Accessories

Die 5	0141714
Die for sheet thickness up to 1 mm	0931611
Punch 3	0117676
Extension	0950316

Warranty and Service

For TRUMPF power and pneumatic tools, a liability period of 12 months applies from the invoice date on. Damage attributable to normal wear, overloading or improper handling of the machine will be excluded from the warranty. Damage due to material or manufacturing defects will be corrected free-of-charge by replacement or repair. Claims can only be accepted when the machine is sent undisassembled to your TRUMPF Service Centre.

The address of your TRUMPF representative can be found under:
www.trumpf-powertools.com

Disposal

The machine, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of power tools into household waste!

Only for EC countries:



According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, power tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

Subject to change without notice.