

Operator's manual



TruTool N 200 (2A1)
TruTool PN 200 (2A1)
TruTool PN 201 (2A1)

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1. Safety

1.1 General safety information



- 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.



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.
 - The connection cable may only be replaced by the manufacturer or an authorized dealer.
-



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.
-

Note

If the power cable is to be replaced, it should be procured from the manufacturer or an authorized dealer to avoid safety hazards.

1.2 Specific safety information for nibbler



Risk of injury to hands.

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

 **WARNING**

Risk of injury from hot and sharp chips!

Chips exit the chip ejector at high speed.

- Use a chip bag.
-

 **WARNING**

Risk of injury 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.
-

2. Description

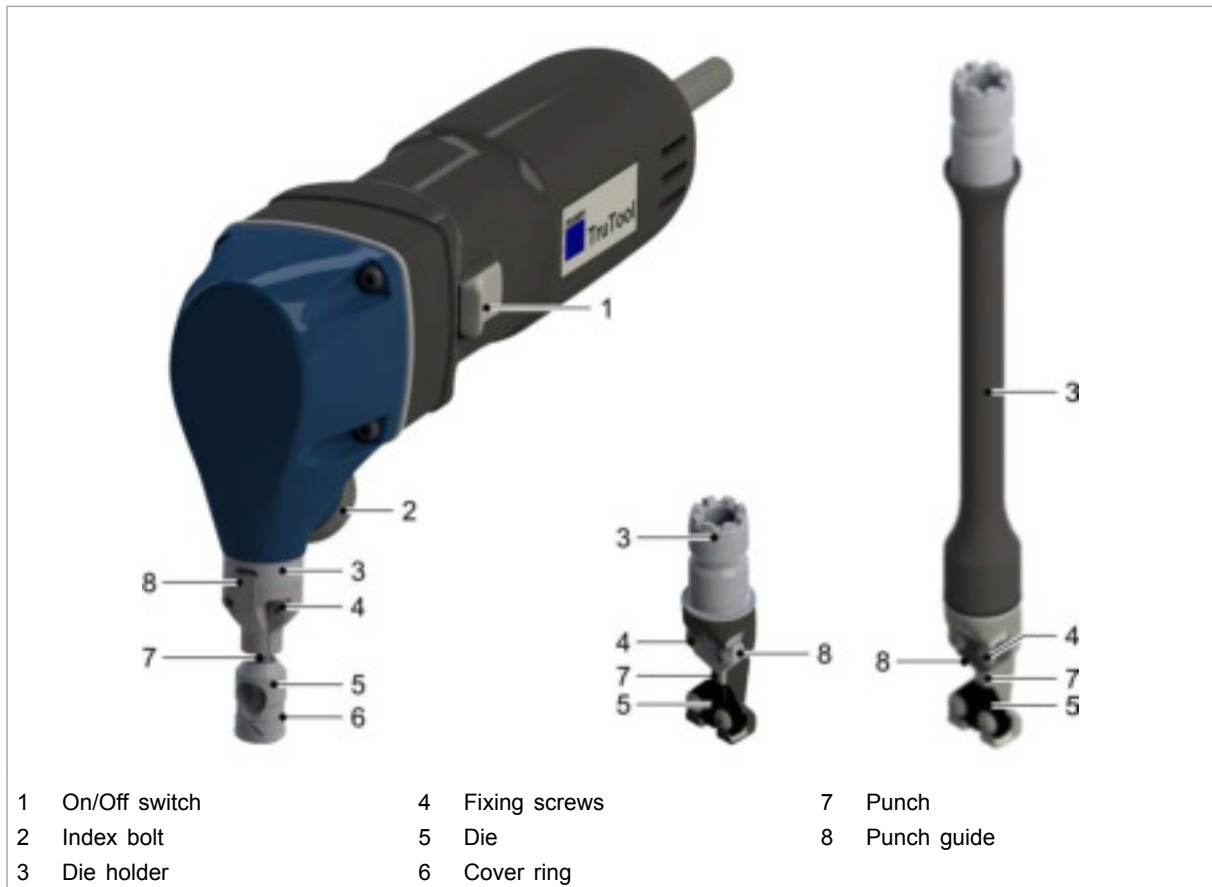


Fig. 66446

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 Nibbler TruTool N 200 is an electrically powered hand-held device designed for the following applications:

- Slitting plate-shaped workpieces made of a punchable material such as steel, aluminum, non-ferrous heavy metals and plastic.
- Slitting pipes and machining corrugated sheets.
- Nibbling straight or curved exterior and interior cutouts.
- Nibbling along scribed lines or templates.



Notes

- Because of the hollow round punch, the nibbler can be rotated at any position such that processing can continue in any direction.
- The nibbling process produces cutting edges free of deformations.

The TRUMPF TruTool PN 200 resp. TruTool PN 201 profiling nibbler is an electrically powered hand-held device 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.

Note

The nibbling process produces cutting edges free of deformations.

2.2 Technical data

TruTool N 200 (2A1)	Other countries			USA
Voltage	230 V	100 V	110 V	120 V
Frequency	50 Hz	50/60 Hz	50 Hz	50/60 Hz
Permissible material thickness: steel up to 400 N/mm²	2.0 mm	2.0 mm	2.0 mm	0.08 in
Permissible material thickness: steel up to 600 N/mm²	1.5 mm	1.5 mm	1.5 mm	0.06 in
Permissible material thickness: steel up to 800 N/mm²	1.0 mm	1.0 mm	1.0 mm	0.039 in
Permissible material thickness: aluminum up to 250 N/mm²	2.5 mm	2.5 mm	2.5 mm	0.1 in
Working speed	1.7 m/min	1.4 m/min	1.6 m/min	5.6 ft/min
Nominal power consumption	550 W	500 W	500 W	500 W
Idle stroke rate	2100/min	2100/min	2100/min	2100/min
Starting hole diameter	17 mm	17 mm	17 mm	0.67 in
Smallest radius for curved cutouts	4.0 mm	4.0 mm	4.0 mm	0.16 in
Cutting track width	8.0 mm	8.0 mm	8.0 mm	0.315 in

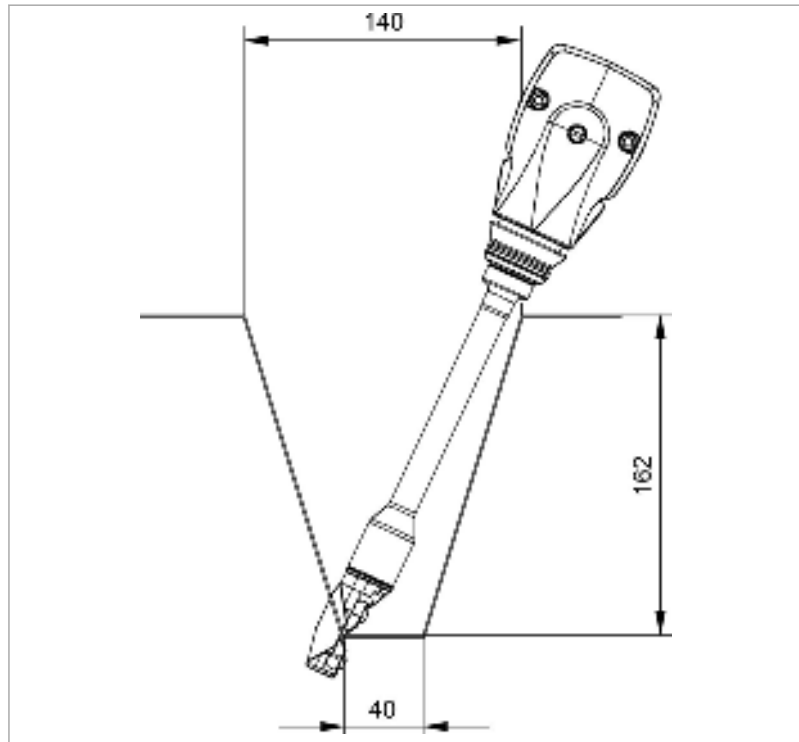


TruTool N 200 (2A1)	Other countries			USA
Weight	1.8 kg	1.8 kg	1.8 kg	4.0 lbs
Safety class	II /	II /	II /	II /

Tab. 1

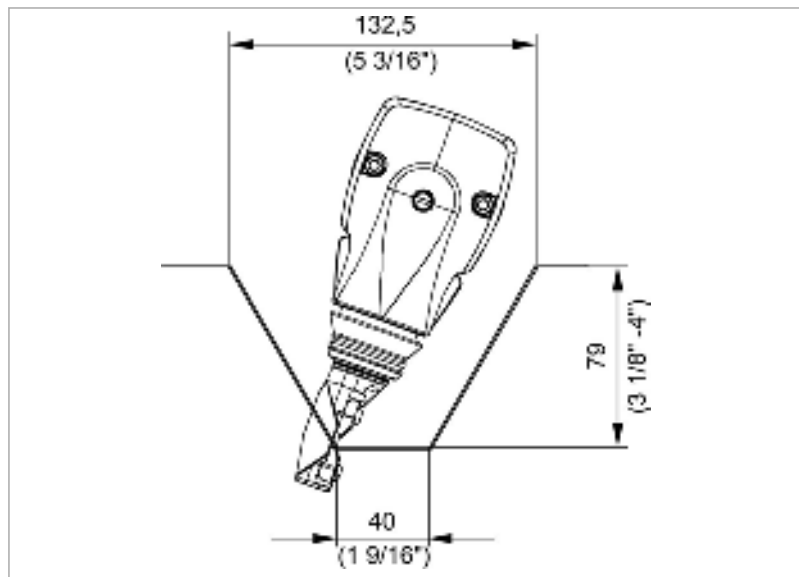
TruTool PN 200 (2A1) TruTool PN 201 (2A1)	Other countries			USA
Voltage	230 V	100 V	110 V	120 V
Frequency	50/60 Hz	50/60 Hz	50 Hz	50/60 Hz
Permissible material thickness: steel up to 400 N/mm²	2.0 mm	2.0 mm	2.0 mm	0.079 in / 14 Ga
Permissible material thickness: steel up to 600 N/mm²	1.5 mm	1.5 mm	1.5 mm	0.06 in / 16 Ga
Permissible material thickness: steel up to 800 N/mm²	1.0 mm	1.0 mm	1.0 mm	0.039 in / 20 Ga
Permissible material thickness: aluminum up to 250 N/mm²	3.0 mm	3.0 mm	3.0 mm	0.126 in / 11 Ga
Working speed	2.1 m/min	1.9 m/min	2.1 m/min	7.2 m/min
TruTool PN 200 (2A1)	2.2 m/min	1.8 m/min	2.0 m/min	6.9 ft/min
TruTool PN 201 (2A1)				
Nominal power consumption	550 W	500 W	500 W	500 W
Idle stroke rate	2100/min	2100/min	2100/min	2100/min
Starting hole diameter	24 mm	24 mm	24 mm	0.94 in
Radius	min. 50 mm	min. 50 mm	min. 50 mm	min. 2.0 in
Cutting track width	5.0 mm	5.0 mm	5.0 mm	0.2 in
Weight	1.8 kg	1.8 kg	1.8 kg	4.0 lbs
TruTool PN 200 (2A1)	2.0 kg	2.0 kg	2.0 kg	4.4 lbs
TruTool PN 201 (2A1)				
Safety class	II /	II /	II /	II /

Tab. 2



TruTool PN 201 in sectional sheets

Fig. 25947



TruTool PN 200 in sectional sheets

Fig. 25948

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.
	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. 3

2.4 Noise and vibration information

WARNING

Noise emission value may be exceeded.

- Wear hearing protection.

WARNING

Vibration emission value may be exceeded.

- Select tools correctly and replace them promptly when they show wear.
- Maintenance may be carried out by trained specialist technicians 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	5.2 (TruTool N 200) 7.3 (TruTool PN 200) 5.9 (TruTool PN 201)
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. Setting work

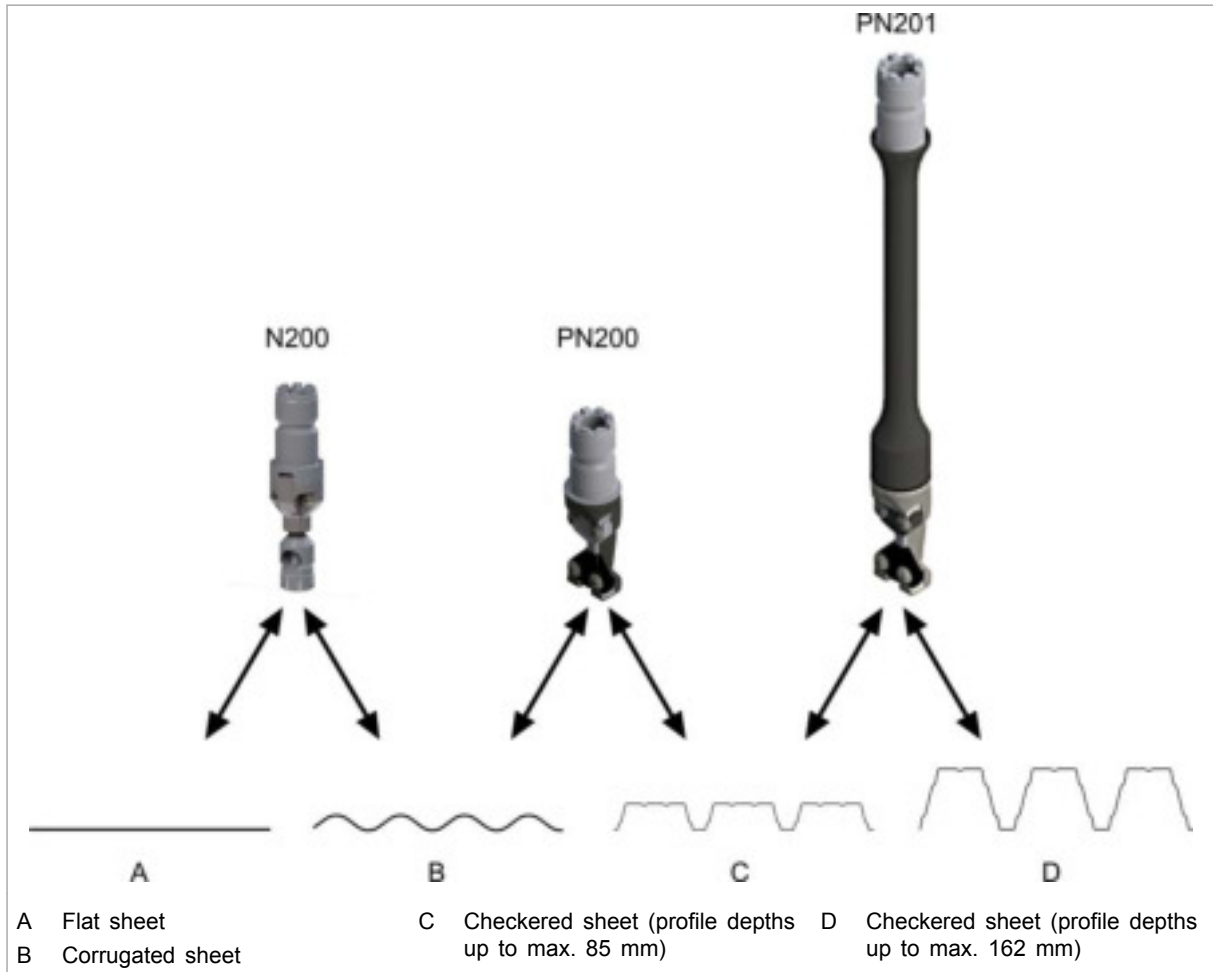
3.1 Select tool (TruTool N 200 / TruTool PN 200 / TruTool PN 201)



Tools

Fig. 65144

Any tool can be fastened to the basic machine.



Areas of application

Fig. 66445

Burr-free cut To make a burr-free cut up to 1 mm thick in the sheet with the tools TruTool PN 200 and TruTool PN 201, the die P1 can be used. The lower cutting clearance reduces burr formation.

4. Operation

WARNING

Risk of injury 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.

CAUTION

Damage to property due to excessively high line voltage!

Motor damage.

- Check the power supply voltage. The power supply voltage must correspond to the information on the nameplate of the machine.

Lubricating oil 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.

4.1 Working with the TruTool N 200 / TruTool PN 200 / TruTool PN 201

Switching on Processing the material

1. Slide the On/Off switch forwards.
2. Once the full speed has been reached: move the machine toward the workpiece.
3. Process the desired cutting line.
4. 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.

Switching off

Note

Do not place a decelerating machine in the chips. The chips can be sucked in by the motor.

5. Slide the On/Off switch to the rear.

4.2 Changing the cutting direction

The direction of the cut can be rotated to the right or the left in 45° increments as needed.

- For right-handed/left-handed operation.
 - To machine sectional sheets
1. Loosen the index bolt (about 3 revolutions) until no more resistance can be felt.
 2. Pull the tool down slightly and turn it in the desired direction. There is a detent position every 45° (cutting direction).
 3. Push the tool back up and tighten the index bolt.
 4. Check: if no air gap can be seen between the housing and the tool, the tool is mounted correctly.

Carrier is engaged.

4.3 Nibbling with templates (TruTool N 200)

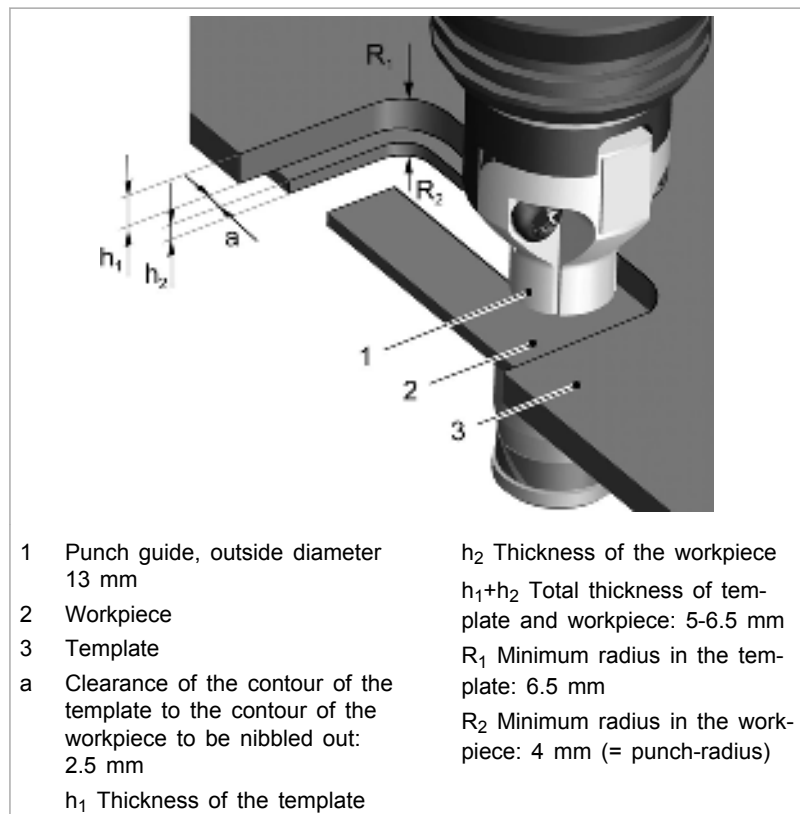


Fig. 25828

The following requirements must be met when nibbling with templates:

- The template must be at least 5 mm thick.
- There must be a clearance of 2.5 mm between the contour of the template and the contour to be nibbled out.
- The nibbler must be guided in such a way that the exterior cutout of the punch guide (1) always remains up against the template.
- Observe a minimum radius of 4 mm.

4.4 Producing interior cutouts

- TruTool N 200:
Produce start bore with at least a 17 mm diameter.
TruTool PN 200 / TruTool PN 201:
Produce start bore with at least a 24 mm diameter.

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 (FI) circuit breaker with a maximum breaking current of 30 mA when using the electric tool outside.
- Only use original TRUMPF accessories.
- The connection cable may only be replaced by the manufacturer or an authorized dealer.

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 punch hourly for wear. A sharp punch provides good cutting performance and is easier on the machine. Change the punch in due time.

Maintenance point	Procedure and interval	Recommended lubricants
Punch guide	Lubricate upon tool change.	Lubricating grease "G1" (25 g)
Punch	Change as needed.	-
Die	Change as needed.	-
Wearing plate	Change as needed.	-
Ventilation slots	Clean as needed.	-
Gearbox and gear head	Every 300 operating hours, have a trained specialist relubricate or replace the lubricating grease.	Lubricating grease "G1" (900 g)

Maintenance positions and intervals for TruTool N 200 / TruTool PN 200 / TruTool PN 201

Tab. 5

5.1 Replacing the tool

If the punch and/or die are blunt, they must be replaced.

Disassembling the punch

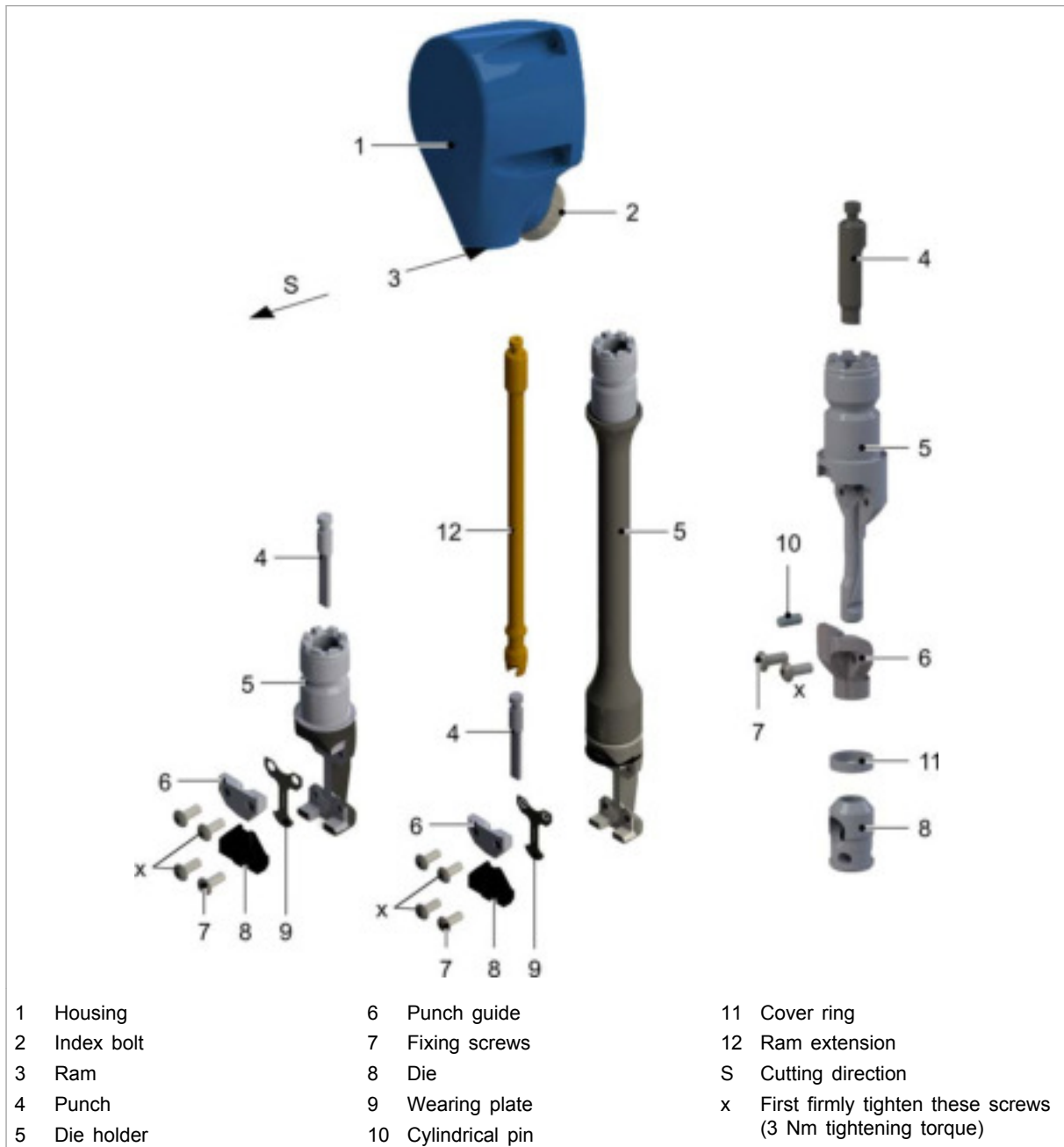


Fig. 65143

Installing the punch

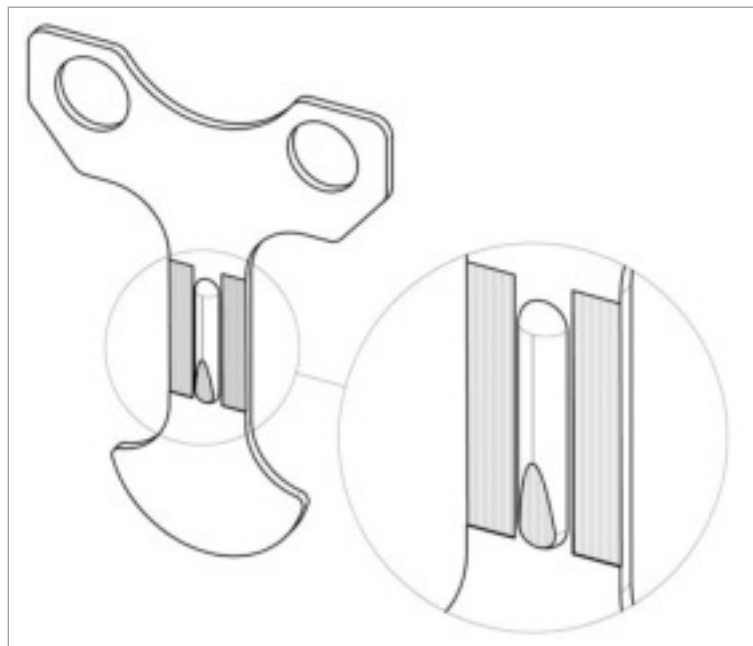
1. Loosen index bolt (2) (6 revolutions).
2. Pull tool out of the housing (1).
3. Remove punch (4).
4. Lightly lubricate the new punch (4) and the boring in the tool with lubricating grease "G1".
5. For TruTool PN 201:

**Replacing the die
(TruTool N 200)**

- Install the ram extension (12) between the ram (3) and the punch (4).
 - Grease with lubricating grease "G1".
6. Hang the punch in the keyway of the ram.
 7. Align the cutting direction towards the front.
 8. Insert tool into the housing (1) with cutting direction facing towards the front.
 9. Position the tool in the desired cutting direction.
 10. Tighten the index bolt (2) all the way.
 11. The gap between housing (1) and die holder (5) must be 0 mm.
 12. Push cover ring (11) upward out of slot.
 13. Push out cylindrical pin (10) using a drift punch.
 14. Pull off die (8) from the carrier pin and replace it with a new die.
 15. Set die on the carrier pin.
 16. Mount cylindrical pin.
 17. Slide the cover ring in the groove downwards.

5.2 Changing the die, punch guide and wearing plate (TruTool PN 200 / TruTool PN 201)

1. Unscrew the fixing screws (7).
2. Remove punch guide (6) and die (8).



Traces of wear on the wearing plate

Fig. 51965

3. As soon as traces of wear (see image) can be clearly seen on the wearing plate, remove the wearing plate (9) and replace it with a new one.
4. Clean the support areas on the die carrier.
5. Center the punch guide and die using the pegs.
6. Fasten the punch guide and die with the screws.

Note

To grease, use lubricating grease "G1".

7. Lubricate the guide surfaces of the punch guide.

Note

Use original screws only.

8. Firmly tighten the screws marked with an "x" first (3 Nm tightening torque).

5.3 Replacing carbon brushes

Notes

- Use only original spare parts from TRUMPF.
 - Observe the information on the rating plate.
- Have the carbon brushes checked and replaced as required by a qualified technician.

6. Accessories and consumables

Consumables TruTool N 200	Order number	Scope of delivery
Punch		
1 piece	-	x
5-pack	1264176	-
Complete die		
1 piece	-	x
2-pack	1264393	-
5-pack	1264394	-
Standard N set		
2 x punches, 1 x die	0961961	-
Punch guide	0945692	x
Tool TruTool N 200 (2A1)	1750694	x ¹

Tab. 6

Consumables TruTool PN 200 / TruTool PN 201	Order number	Scope of delivery
Punch		
1 piece	-	X
5-pack	1315713	-
10-pack	1264146	-
Complete die		
1 piece	-	X
2-pack	1264153	-
5-pack	1264154	-
Die P1		
1 piece	1213131	-
Wearing plate		
1 piece	-	X
2-pack	1429275	-
5-pack	1429276	-
Punch guide		
1 piece	0945697	X
2-pack	1264367	-
Standard PN set		
2 x punches, 1 x die, 2 x wearing plates	1429289	-
TruTool PN 200 (2A1) tool	1750693	x ¹
TruTool PN 201 (2A1) tool	1750692	x ¹

Tab. 7

1 Depending on the machine type ordered.



Accessories	Order number	Scope of delivery
TRUMPF Box S1	1763681	X
TRUMPF Box S 102 lining	1771093	X
Screwdriver Torx T-20	1775531	X
Operator's manual	1778481	X
Safety information	0125699	X
Punching and nibbling oil for aluminum (1 l)	0125874	-
Punching and nibbling oil for steel (0.5 l)	0103387	-
Lubricating grease "G1" (25 g)	0344969	-
Lubricating grease "G1" (900 g)	0139440	-
Carbon brush set (2 pieces 110 V - 230 V)	1813661	-
Chip bag (only TruTool N 200 (2A1))	0088622	-

TruTool N 200, TruTool PN 200, TruTool PN 201

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:
 - 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**