

Operator's manual



N 700-0

english

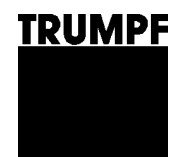


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Warranty

Replacement parts list

Addresses

1. Safety

1.1 General safety rules

- USA/CAN** ➤ Read the Operator's Manual and the general safety rules (Material number 1239438, red document) in their entirety before starting up the machine. Follow precisely the directions contained therein.

- Rest of the world** ➤ Read the Operator's Manual and the safety instructions (Material number 125699, red document) in their entirety before starting up the machine. Follow precisely the directions contained therein.
- The safety regulations according to DIN VDE, CEE, AFNOR and other regulations which are valid in individual countries should be adhered to.



Danger

Lethal danger due to electric shock!

- Remove the plug from the plug socket before undertaking any maintenance work on the machine.
 - Check the plug, the cable and the machine for damage each time before the machine is used.
 - Keep the machine dry and do not operate in damp rooms.
 - When using the electric tool outside, connect the fault current (FI) protective switch with a maximum breaking current of 30 mA.
-



Warning

Danger of injury possible due to improper handling!

- When working with the machine, wear safety glasses, hearing protection, protective gloves and work shoes.
 - Do not plug in the plug unless the machine has been switched off. Pull out the mains plug after use.
-



Warning

Risk of injury to the hands!

- Do not place your hand into the processing line.
 - Use both hands to hold the machine.
-



Caution

Damage to property possible due to improper handling!

The machine will be damaged or destroyed.

- Do not use the power cord to carry the machine.
 - Always guide the electric cord away from the back of the machine and do not pull it across sharp edges.
 - Arrange for start-ups and checks on manual electric tools to be carried out by a trained specialist. Only used the original accessories provided by TRUMPF.
-



Warning

Risk of injury from high-temperature and sharp chips!

High-temperature and sharp chips are expelled from the chip ejector at high speed.

- The use of the chip bag is recommended.
-



Warning

Risk of injury from falling machinery

The entire weight of the machine must be taken up after processing of the work workpiece.

- Use suspension bracket with balancer.
 - Use suspension cable.
-

1.2 Specific safety rules

Ensure the tool is connected to a circuit protected with a time delay fuse (15 A min.).

2. Description



Nibbler N 700-0

Fig. 9041



2.1 Correct use



Warning

Risk of injury!

- Use machine only for the processing and materials which are described under "Correct use".

The TRUMPF Nibbler N 700-0 is an electric hand tool used for the following applications:

- Slitting plate-shaped workpieces made of a punchable material such as steel, aluminium, non-ferrous heavy metals, and plastic.
- Slitting of tubes and for machining edged sheet profiles and/or press brake bendings, e.g. with tanks, crash barriers, troughs, etc.
- Nibbling straight or curved exterior and interior cutouts.
- Nibbling from scribed lines or templates.

Note

The nibbling process produces edges free of deformations.

2.2 Technical data

	Rest of the world			USA
	Values	Values	Values	Values
Voltage	230 V	120 V	110 V	120 V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
<ul style="list-style-type: none"> • Steel 400 N/mm² • Steel 600 N/mm² • Steel 800 N/mm² • Aluminium 250 N/mm² 	7.0 mm	7.0 mm	7.0 mm	0.28 in
	5.0 mm	5.0 mm	5.0 mm	0.2 in
	3.5 mm	3.5 mm	3.5 mm	0.14 in
	10 mm	10 mm	10 mm	0.4 in
Working speed	1.6 m/min	1.6 m/min	1.6 m/min	5.2 ft/min
Nominal power consumption	2000 W	2000 W	2000 W	-
Nominal current	-	-	-	15 A
Stroke rate with idle run	630/min	630/min	520/min	520/min
Weight	11.7 kg	11.7 kg	11.7 kg	26 lbs
Cutting track width	11 mm	11 mm	11 mm	0.433 in
Start hole diameter for die	60 mm	60 mm	60 mm	2.4 in
Sheet profile 90° bending radius inside	min. 10 mm	min. 10 mm	min. 10 mm	0.4 in
Smallest radius with curved cuts	135 mm	135 mm	135 mm	5.3 in
Clearance for template	11 mm	11 mm	11 mm	0.433 in
Protective insulation	Class II	Class II	Class II	Class II

Technical data

Table 1

Noise and vibration	Blade values in accordance with EN 50144
A-weighted sound level	Typically 89 dB (A)
A-weighted acoustic power level	Typically 97 dB (A)
Hand-arm vibration	Typically less than or equal to 2.5 m/s ²

Noise and vibration

Table 2

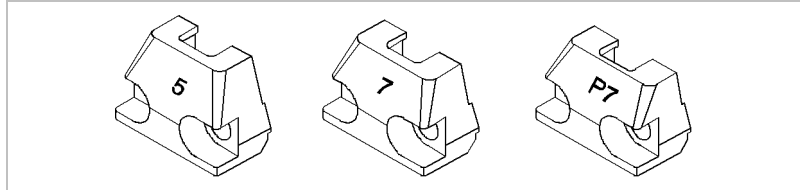
Note

The measured values specified above may be exceeded while working.

3. Tool assembly

3.1 Selecting the die

One of the following types of dies can be selected for the machining process, depending on thickness, tensile strength and type of workpiece:



Types of dies

Figur: 9431

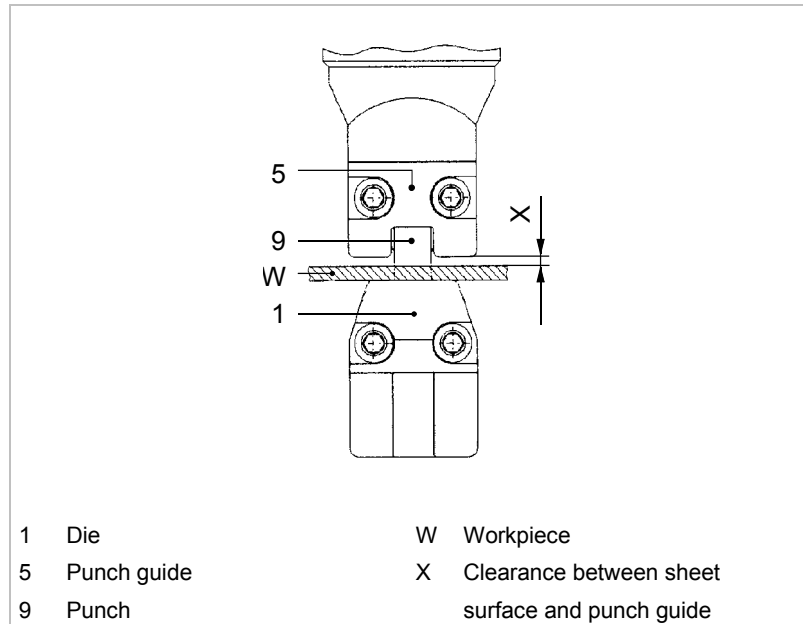
Type of die	Material identification number
5	098723
7	098722
P7	098721

Table 3

Components	Type of die		
	5	7	P7
Aluminium 250 N/mm ²	3-5 mm	5-7 mm	7-10 mm
Mild steel 400 N/mm ²	3-5 mm	5-7 mm	-
Stainless steel 600 N/mm ²	3-5 mm	-	-
Stainless steel 800 N/mm ²	maximum 2.5 mm	-	-
Profiles, i.e. workpieces with press brake bending of up to 90°	3 mm (2.5")	>3.5 mm	5-7 mm

Table 4

Use the die with the greatest feasible height



Direct clearance from the die to the punch

Fig. 16811

Note

Take care to ensure that the clearance X is kept as small as possible.

Does severe back-and-forth movement (hammering) occur during the cutting process?

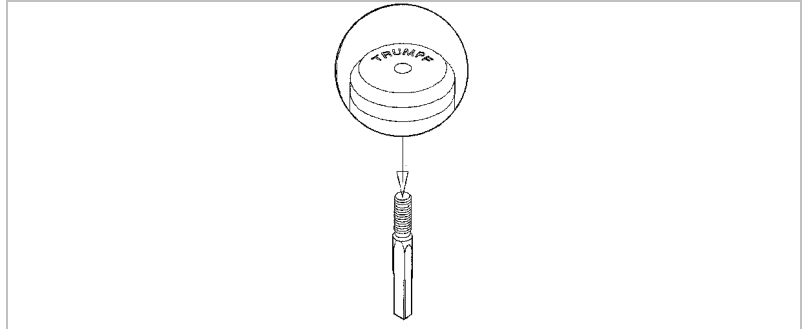
The reason is an unsuitable die. Excessive tool wear and increasing loads on the machine are the result.

- Use the die with the greatest feasible height.

3.2 Selecting the punch

2 different punches are available for machining sheets of different tensile strengths:

- Standard punch for the machining of sheets with a tensile strength of up to 400 N/mm² (e.g. mild steel), Order No. 104589.



Standard punch

Fig. 9438

- Punch for high-tensile sheets for the machining of materials with a tensile strength >400 N/mm² (e.g. chromium steel), Order No. 104590.

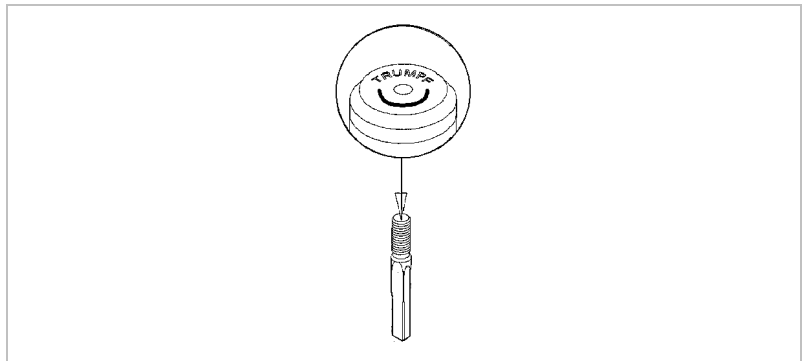
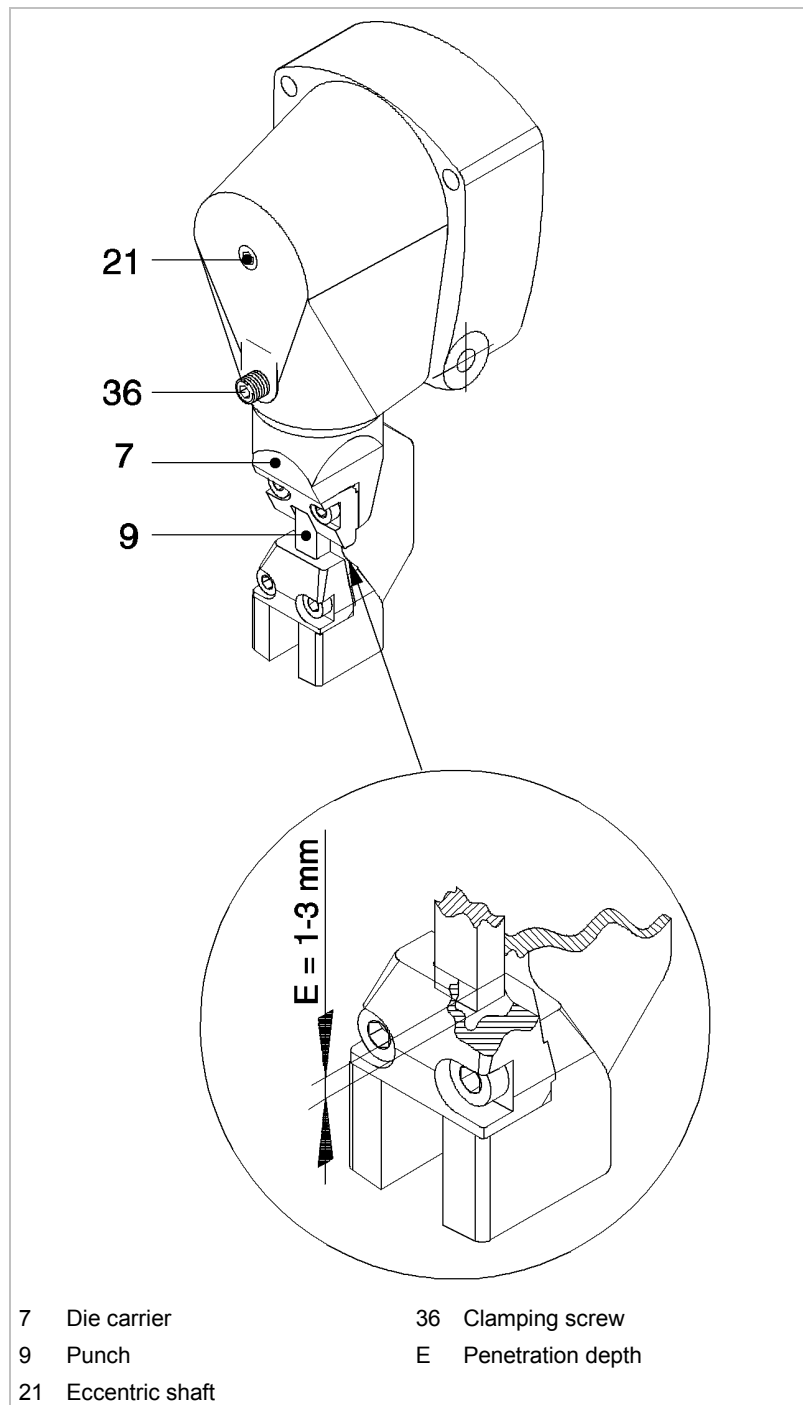


Fig. 9468

3.3 Checking penetration depth of the punch



Penetration depth of the punch

Fig. 9015



The penetration depth of the punch into the die should be 1 to 3 mm.

1. Rotate the eccentric shaft (21) until the punch (9) has reached its maximum penetration depth.
2. Loosen clamping screw (36).
3. Rotate the die carrier (7) by 360° as often as needed until the punch penetration depth of 1-3 mm has been achieved. One rotation (360°) corresponds to a height adjustment of 1.75 mm.
4. Retighten clamping screw (36).

4. Operation

4.1 Working with the N 700-0



Caution

Damage to property possible due to too-high network voltage!

Damage to the motor.

- Check the power supply. The power supply must correspond to the information on the machine type plate.
- When using an extension cord which is longer than 5 m, take care to ensure that it has a line diameter of at least 2.5 mm².



Warning

Danger of injury possible due to improper handling!

- When working with the machine, always ensure that it has a secure base.
- Never touch the tool while the machine is running.
- Always guide the machine away from the body while working.
- Do not work holding the machine above your head.

Switching on the N 700-0

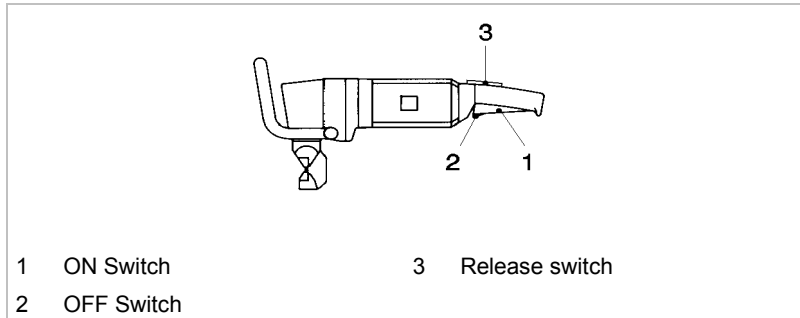


Fig. 9306

- Press release switch (3) and On switch (1).
The On switch 1 remains engaged (continuous operation).
The motor is running.

Note

The possibility exists of an instantaneous connection occurring. Press the release switch. Then press On switch 1 and Off switch 2 simultaneously.



Note

The cutting result is improved and the service life of the cutting tool increased if the cutting track is coated with oil before machining the workpiece.

Material	Oil
Recommendation for steel	Punching and nibbling oil, Order No. 103387
Recommended for aluminium	Wisura oil, Order No. 125874

Recommendation for oil

Table5

Working with the N 700-0

1. Do not move the machine towards the workpiece until full speed has been reached.
2. Machine/process the material.
 - Machine the desired cutting line.
3. In the event that the cutting track ends in the sheet, pull the still-running machine a few millimetres back towards where the cutting track has already been cut open.
4. Switch the machine off.

Switching off the N700-0

- Press On/Off switch 2.

4.2 Changing the cutting direction

In situations where space is limited, the tool can be mounted in such a way as to have a different cutting direction.

- Mount the tool at an angle turned 90° to the right or to the left (cutting of profiles).
 - Mount the tool at a 180° rotation (nibbling to the rear).
1. Loosen clamping screw (14).
 2. Turn the die carrier (7) in the desired direction.
 3. Retighten the clamping screw (14) by hand.

4.3 Nibbling with templates

The following requirements must be met when nibbling with templates:

- The template must be at least 5 mm thick.
- The contour of the template must have a clearance of 11 mm to the contour to be nibbled out.
- Guide the nibbler in such a way that the exterior cut-out of the punch guide (5) always remains up against the template.
- Observe a minimum radius of 135 mm.

4.4 Making inner cutouts

Interior cutouts require a start hole at least 60 mm in diameter.

5. Maintenance



Caution

Damage to property possible due to blunt tools!

Overloading of the machine.

- Check the cutting edge of the cutting tool hourly for wear. Sharp cutting tools provide good cutting performance and are easier on the machine. Replace punches promptly.



Warning

Risk of possible injury due to improper repairs!

The machine does not function properly.

- Repairs should be carried out only by a trained specialist.

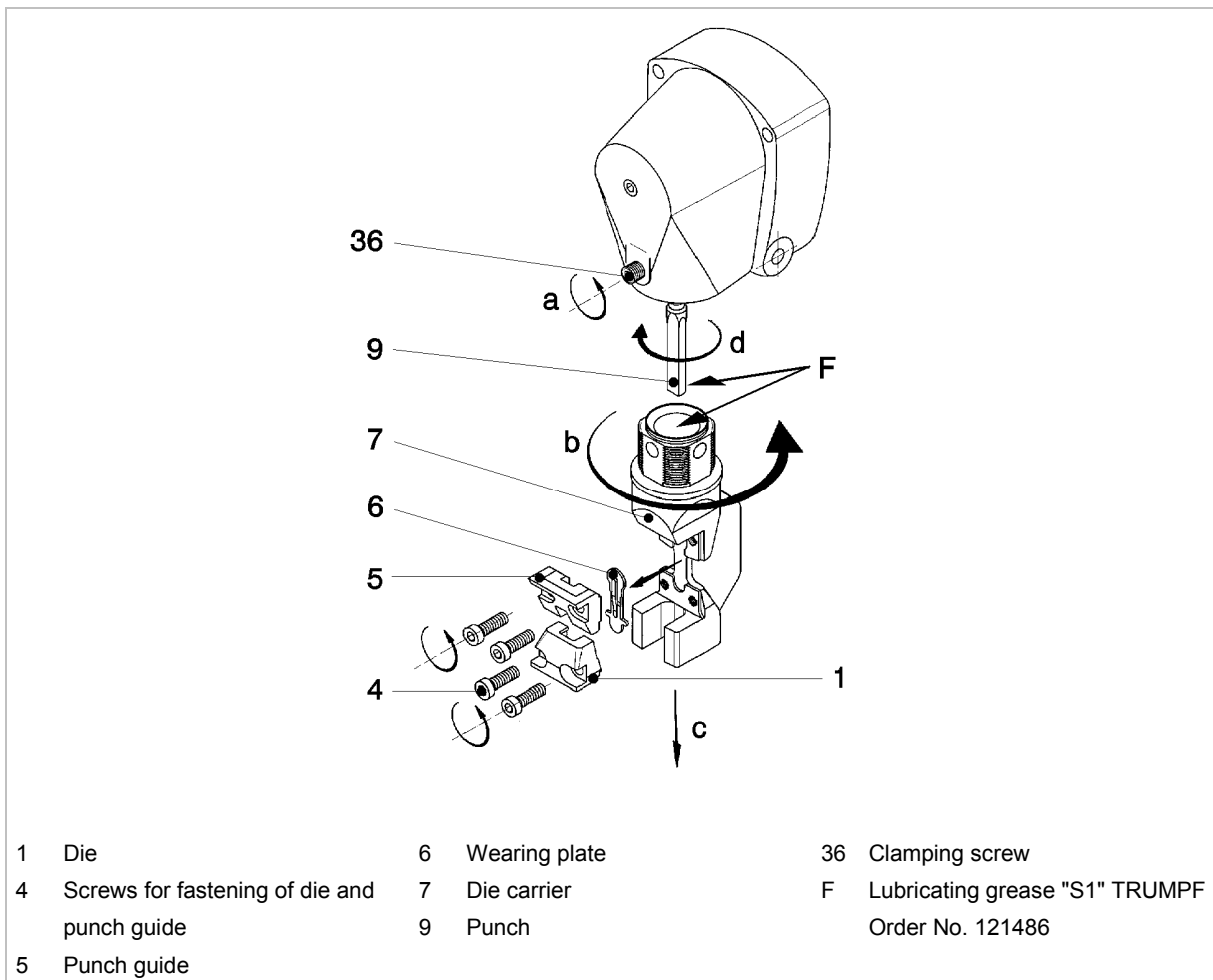


Fig. 9016



Maintenance point	Procedure and time interval	Recommended lubricants	Order No. Lubrication agents
Punch	Check hourly	-	-
Punch and die carrier	With each tool change	Lubricating grease "S1"	121486
Gearbox and gear head (2)	After 300 operating hours, arrange for a trained specialist to relubricate or to replace the lubricating grease.	Lubricating grease "G1"	0139440
Punch	Regrind as needed	-	-
Punch	Replace as needed	-	-
Ventilation slots	Clean as needed	-	-
Tool and wearing plate	Check hourly	-	-
Die	Replace as needed	-	-
Wearing plate	Replace as needed	-	-

Maintenance positions and maintenance intervals

Table 6

5.1 Changing the tool

Replace the tools when the punch and/or die are blunt and can no longer be reground.

Disassembling the punch

1. Loosen clamping screw (36).
2. Rotate die carrier (7) by 45°.
3. Pull die carrier (7) out towards the bottom.
4. Remove punch (9) by rotating it.

Installing the punch

1. Lightly lubricate the square part of the punch and die carrier bore hole with lubricating grease "S1" TRUMPF Order No. 121486.
2. Ensure that penetration depth is correct.

Changing the die and the punch guide

1. To replace the die and the punch guide, unscrew the fixing screws (4).
2. Clean support areas on the die carrier (7).
3. Take care to ensure that the replacement parts are clean.
4. Lubricate the guide surfaces of the punch guide with lubricating grease "S1" TRUMPF Order No. 121486.
5. Screw the fastening screws tightly when mounting the die and the punch guide. (Tightening torque 16.5 Nm)
Use original screws only!

(see Fig. 9016, Pg. 16)

5.2 Resharpener tools

Punch

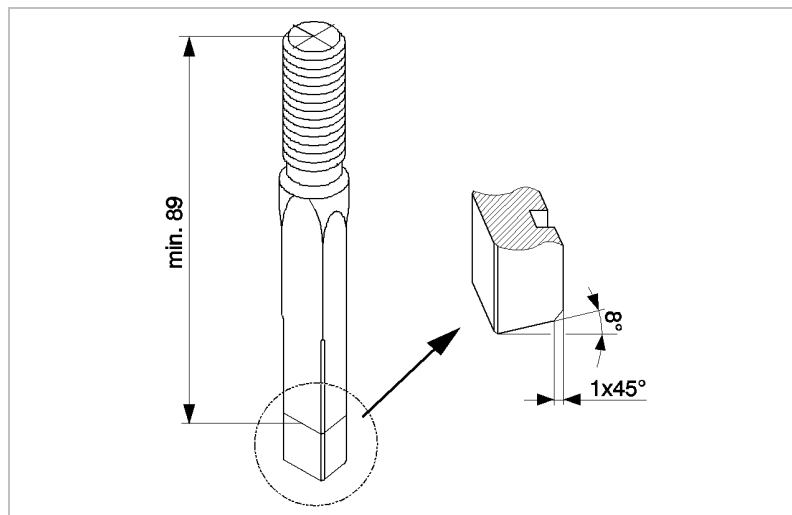


Fig. 9432

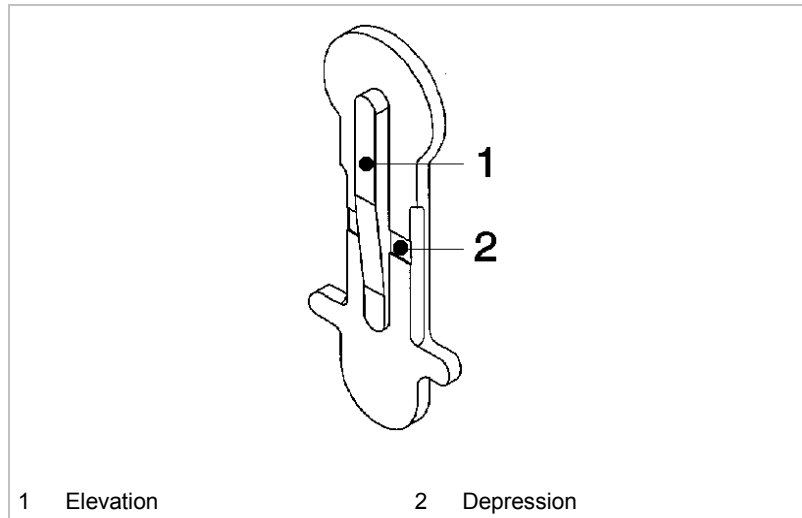
The punch can be reground by a total of approximately 10 mm.

- Regrind the grinding surface in accordance with the following diagram, making sure that it is well-cooled during the process.
- Lightly apply fine-grained oil stone to the cutting edge.
- Observe a minimum length of 89 mm. Shorter punches must be replaced (risk of collision).

Note

Dies can not be resharpened.

5.3 Wearing plate



Wearing plate

Fig. 9468

The wearing plate protects the die carrier against excessive wearing. (Order No. 112922)

1. Replace the wearing plate when the elevation has become worn down.
2. Replace the wearing plate when the depression is no longer visible.

Note

Excessive wearing can overload the machine and lead to a worsening of cutting quality.



5.4 Replacing carbon brushes

The motor comes to a standstill when the carbon brushes are worn out.

- Have the carbon brushes checked and replaced as needed by a trained technician.

Note

Only use original replacement parts and observe the specifications on the type plate.

6. Wearing parts

Designation	Order No.
Punch (standard)	104589
Punch for high-tensile sheets	104590
Die 5	098723
Die 7	098722
Die P7	098721
Wearing plate	119173

Table 7

Ordering wearing parts To ensure fast delivery of the correct original and wearing parts:

1. Give the order number.
2. Enter further order data:
 - Tension data
 - Number of pieces
 - Machine type
3. Give complete dispatch data:
 - Correct address.
 - Required delivery type (e.g. air mail, courier, express mail, ordinary freight, parcel post).
4. Send the order to the TRUMPF representative office. For TRUMPF service addresses, see the address list at the end of the document.

7. Original accessories

Designation	Order No.
Set of tools (punch and die, mounted) handle	103555
Allen key DIN 911-12	067920
Allen key	118860
Allen key DIN 911-5	067857
2 cap screws M14x45 for the fastening of the handle DIN 912	105083
Tube lubricating grease "S1"	121486
Operator's manual	103067
Safety instructions (printed in red), other countries	125699
Safety instructions (printed in red), USA	1239438

Table 8

8. Options

Designation	Order No.
Chip bag	109275
Punching and nibbling oil for steel (0.5 litre)	103387
Punching and nibbling oil for aluminium (1 litre)	125874
Case	121585
Suspension bracket	105001

Table 9