

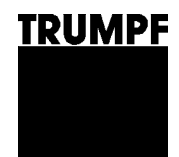
# Operator's manual



## TruTool N 350 (1A2)

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English



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**Guarantee**

**Spare parts list**

**Addresses**

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# 1. Safety

## 1.1 General safety information

- Before starting-up the machine, read the operator's manual and the safety information (order no. 0373678) in their entirety and carefully follow the instructions given.
- Adhere to the safety regulations in accordance with DIN VDE, CEE, AFNOR and to the specific regulations of the country of operation.



**Danger**

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### **Risk of fatal injury from electric shock**

- When working with the machine do not touch any electrical lines. The machine is not insulated.
- 



**Warning**

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### **Risk of injury due to improper handling.**

- Always detach the compressed air hose from the machine prior to maintenance work.
  - Check the compressed air hose, connection coupling and machine for damage before each use.
  - Wear safety glasses, hearing protection, protective gloves and work shoes when working at the machine.
  - Connect compressed air only when the machine is switched off.
  - Always lay the compressed air hose away from the back of the machine.
- 

## 1.2 Specific safety information



**Warning**

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### **Risk of injury to hands.**

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



**Warning**

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### **Risk of injury from hot and sharp chips!**

**Hot and sharp chips are emitted from the chip dumping at high speed.**

- Make sure the chips are discharged downwards.
  - Use a chip bag (optional).
-



**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.
- 



**Warning**

**Risk of injury from falling machinery**

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

- Use suspension eyelet (optional) with a balancer or securing rope.
- 



**Caution**

**Damage to property due to improper handling.**

**The machine will be damaged or destroyed.**

- Always position the compressed air hose leading away from the machine, at back of the machine. Do not pull the cable over sharp edges.
  - Have servicing and inspections of hand-held compressed air tools carried out by a qualified technician. Only use original TRUMPF accessories.
-

## 2. Description



Nibbler TruTool N 350

Fig. 10191

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## 2.1 Intended use



### Warning

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#### Risk of injury

- Only use the machine for work and materials as described under "Intended use."

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The TRUMPF Nibbler TruTool N 350 is a hand tool powered by compressed air used for the following applications:

- 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.
- Nibbling along scribed lines or templates.
- Nibbling with the aid of a guide (optional).

#### Information

The nibbling process produces cutting edges free of deformations.

## 2.2 Technical data

	Other countries	USA
	Value	Value
<b>Max. material thickness:</b>		
• Steel 400 N/mm <sup>2</sup>	3.5 mm	0.138 in
• Steel 600 N/mm <sup>2</sup>	2.3 mm	0.091 in
• Steel 800 N/mm <sup>2</sup>	1.8 mm	0.071 in
• Aluminum 250 N/mm <sup>2</sup>	3.5 mm	0.138 in
<b>Working speed</b>	1.3 m/min	4.265 ft/min
<b>Smallest radius with curved cutouts</b>	7 mm	0.276 in
<b>Starting hole diameter for die</b>	Min. 30 mm	1.181 in
<b>Cutting track width</b>	14 mm	0.551 in
<b>Nominal power consumption</b>	1100 W	1100 W
<b>Stroke rate with nominal load</b>	530/min	530/min
<b>Weight</b>	4.6 kg	10.141 lbs
<b>Max. operating pressure (flow pressure)</b>	6 bar	87 psi
<b>Air consumption at 6 bar</b>	3.1 m <sup>3</sup> /min	110 cubic ft/min
<b>Inside diameter of the compressed air hose</b>	18 mm	0.7 in (3/4")

Table 1

Vibration	Measured values in accordance with EN 50144
Hand-arm vibration	≤2.5 m/s <sup>2</sup>

Table 2

Values were measured while cutting sheet steel 400 N/mm<sup>2</sup> with max. material thickness.

Noise emissions	Measured values in accordance with EN 50144
A-rated sound level L <sub>WA</sub>	90 dB
A-rated acoustic power level at the work place L <sub>PA</sub>	98 dB

Table 3

The noise emission values given are the sum of the measured values and the corresponding uncertainties. They represent an upper limit of the possible measured values.

### 3. Setting work

#### 3.1 Select punch and die

There are 2 different punches for machining sheets with different tensile strengths:



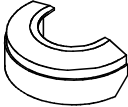
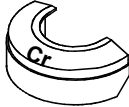
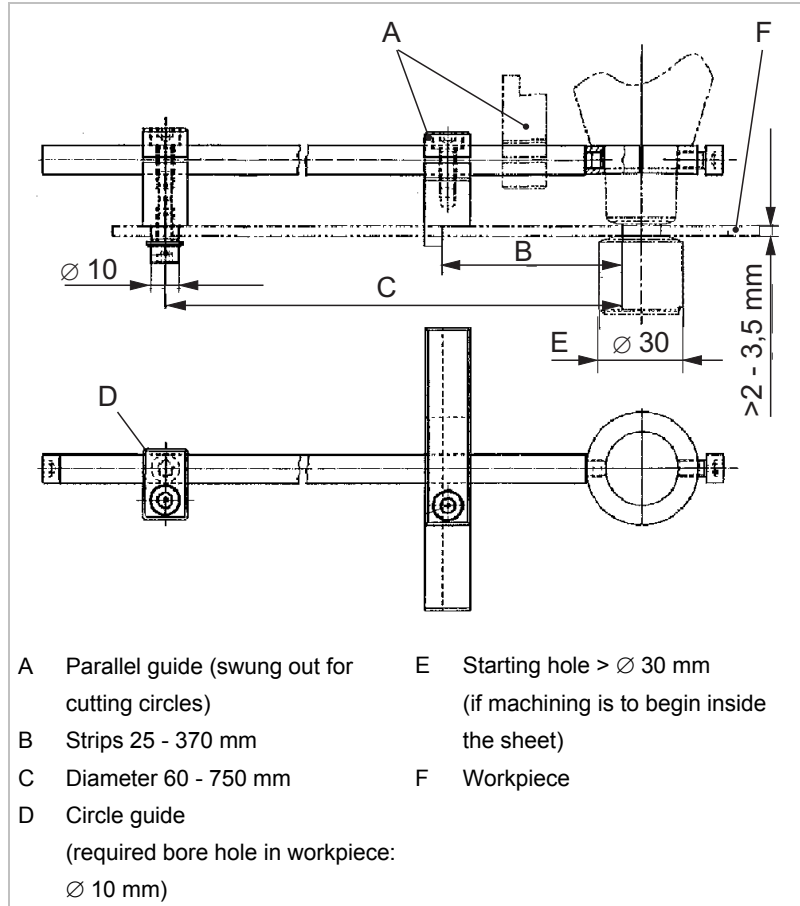
Components	Punch	
	Standard	High-tensile
		
Order No.	0093538	0103545
Mild steel 400 N/mm	+	
Stainless steel 600 N/mm <sup>2</sup>		+
Stainless steel 800 N/mm <sup>2</sup>		+
	Die	
	Standard	High-tensile
Order No.	0093536	0103546
		

Table 4



### 3.2 Guide (optional)

The guide can be used to help produce workpieces with parallel edges, circular cutouts etc.

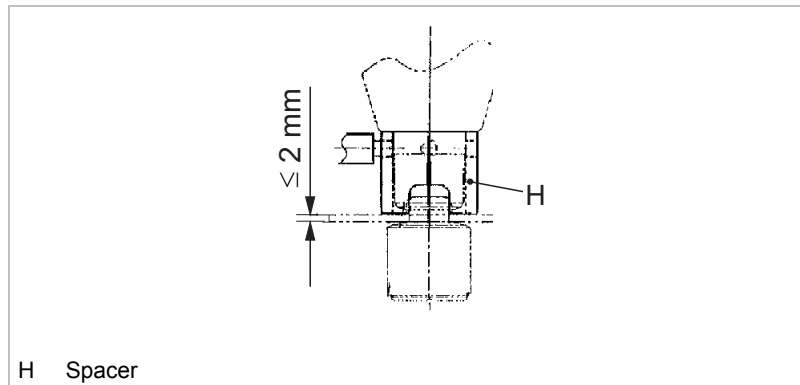


- |   |   |   |   |
|---|---|---|---|
| A | Parallel guide (swung out for cutting circles)                      | E | Starting hole $> \varnothing 30$ mm (if machining is to begin inside the sheet) |
| B | Strips 25 - 370 mm  | F | Workpiece   |
| C | Diameter 60 - 750 mm  |   |   |
| D | Circle guide (required bore hole in workpiece: $\varnothing 10$ mm) |   |   |

Guide

Fig. 16462

**Spacer** For machining sheets of  $\leq 2$  mm, the distance between the stripper and the die is adjusted to the material thickness using the spacer (H).



H Spacer

Spacer (optional, Order number 0110104)

Fig. 16463

## 4. Operation

### 4.1 Working with the TruTool N 350



**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.

#### Switching on the TruTool N 350

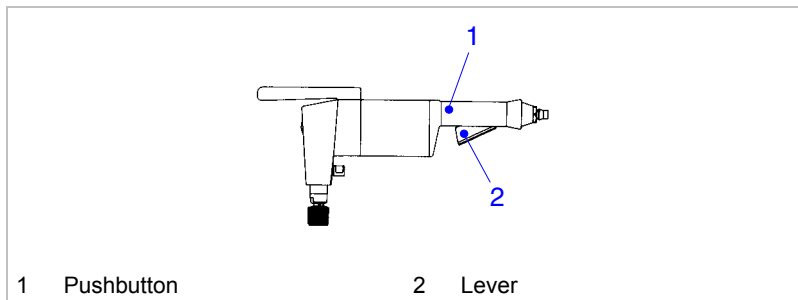


Fig. 10220

#### Continuous operation

1. Press the pushbutton (1).
2. Press the lever (2) against the motor housing.
3. Release the pushbutton

#### Working with the TruTool N 350

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

#### Information

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

Material	Oil
Steel	Punching and nibbling oil, Order No. 0103387
Aluminum	Wisura oil, Order No. 0125874

Recommendation for oil

Table 5

**Switch off the TruTool N 350**

- Release the lever (2).

The lever springs back to the initial position and the compressed air is interrupted.

## 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).
1. Release the lock (31).
  2. Rotate die carrier (3) by 90° in the desired direction.
  3. Retighten the locking mechanism (31).

## 4.3 Nibbling with templates

The following requirements must be met when nibbling with templates:

- The template must be at least 3-4 mm thick.
- There must be a clearance of 5.5 mm between the contour of the template and the contour to be nibbled out.
- The nibbler is to be guided in such a way that the outside diameter of the punch guide is always up against the template.
- Observe a minimum radius of 7 mm (=punch-radius).

## 4.4 Making interior cutouts

Interior cutouts require a starting hole at least 30 mm in diameter.

## 5. Maintenance



**Warning**

### Risk of injury due to uncontrolled machine movements.

- Remove the compressed air hose when changing tools and before performing any maintenance work on the machine.



**Warning**

### Risk of injury due to incorrect repair work!

#### Machine does not work properly.

- Repair work may only be carried out by a qualified technician.



**Caution**

### Damage to property caused by blunt tools!

#### Machine overload.

- 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.

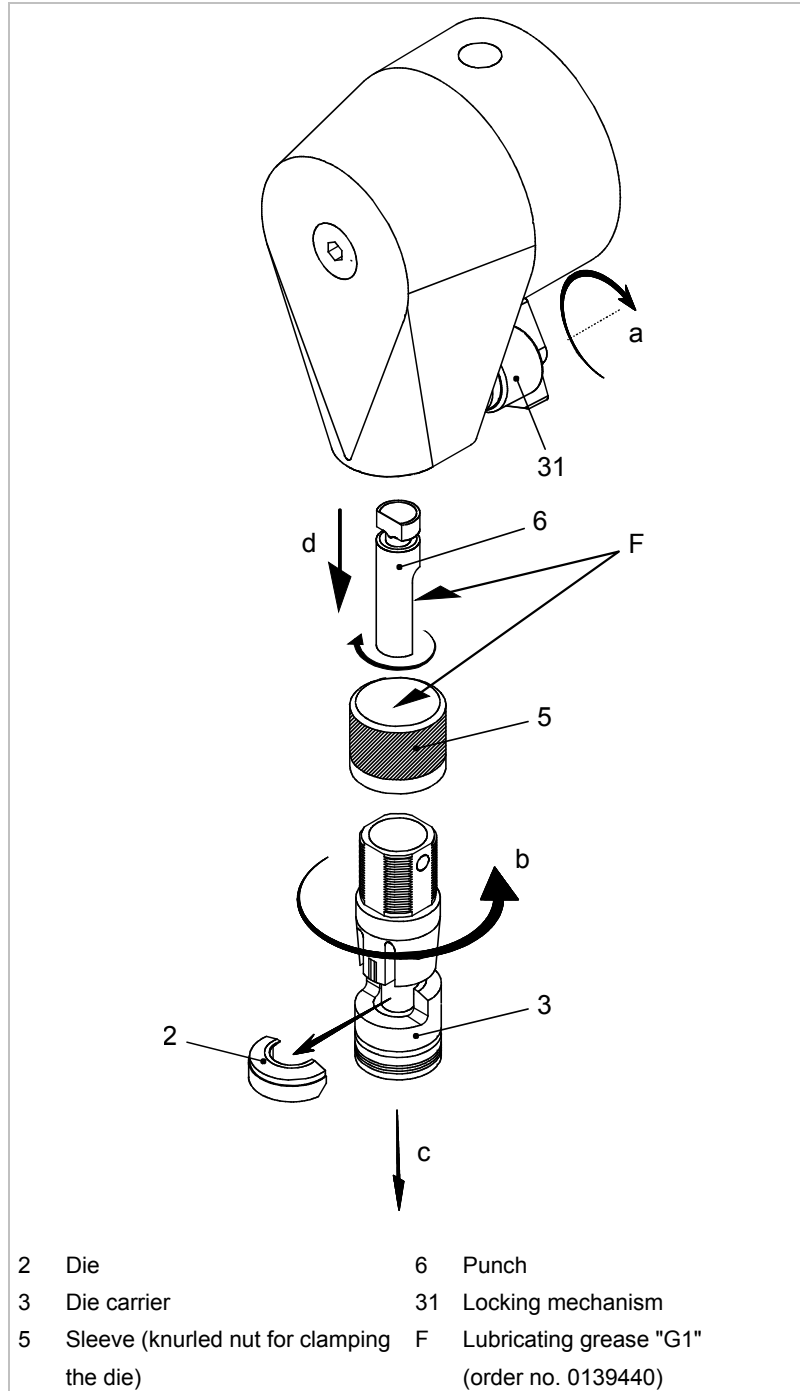
Maintenance point	Procedure and interval	Recommended lubricant	Lubricant Order No.
Punch	Change as needed.	-	-
Punch guide	Lubricate upon tool change.	Lubricating grease "G1"	0344969
Die	Change as needed.	-	-
Wearing plate	Change as needed.	-	-
Gearbox and gear head	Have a qualified technician relubricate or replace the lubricating grease every 300 operating hours.	Lubricating grease "G1"	0139440
Oil mist lubrication device	Maintain daily in accordance with the manufacturer's specifications (see "Supplying with power and guaranteeing lubrication", p. 16).	-	-
Fins	Have these checked and replaced if necessary by a qualified specialist.	-	-
Strainer	Clean every 10 operating hours or when there is a decline in performance.	-	-

Maintenance table

Table 6

## 5.1 Replacing the tool

If the punch and/or die is blunt or the type of application changes, the tools must be reground or replaced.



Changing the punch

Fig. 9677

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## Changing the punch

1. Open the locking mechanism (31).
2. Rotate the die carrier (3) by 45°.
3. Pull die carrier (3) out towards the bottom.
4. Rotate the punch (6) by 180° and pull it out towards the bottom.
5. Lightly lubricate the the punch and die carrier bore hole with lubricating grease "G1" (Order No. 0139440).
6. Insert the punch (6) by rotating it.
7. Align the punch to 45°.
8. Install the die carrier (3).

## Changing the die

1. To change the die (2), loosen the knurled nut (=sleeve 5) and slide it upwards.
2. Clean the support areas on the die carrier (3).
3. Clamp the new die in place in the die carrier with the sleeve (5).

## 5.2 Resharpener tools

### Punch

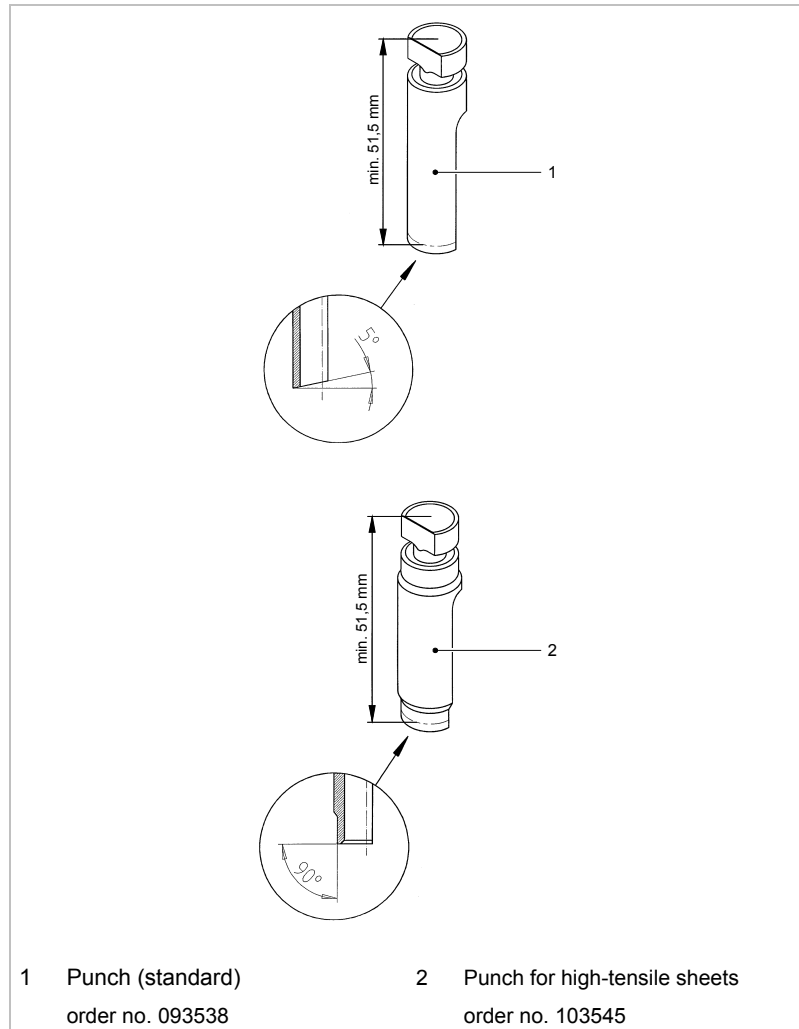


Fig. 9907

The punch can be reground up to the specified minimum length.

- Regrind the grinding surface in accordance with the 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 51.5 mm. Shorter punches must be replaced (risk of collision).

### Die

Dies can not be resharpened.

## 5.3 Supplying with power and guaranteeing lubrication



Caution

**Damage to property due to improper handling.**

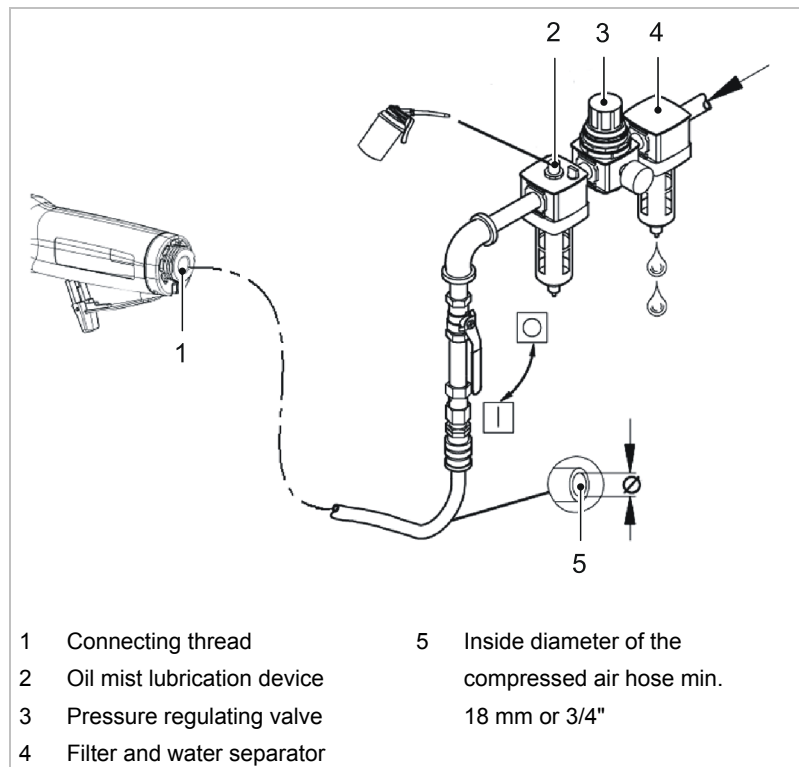
**Failure of the compressed air motor.**

- Do not exceed the maximum operating pressure.
- Regularly lubricate the compressed air motor. Install an oil mist lubrication device into the compressed air line.

### Supplying compressed air

#### Prerequisite

- Pressure regulating valve and connecting thread are set up correctly.



Compressed air supply

Fig. 52385

1. Install the filter and water separator (4).
2. Drain/check the water separator daily.

#### Information

- To ensure a supply of compressed air, the tube cross-sections in the entire line system must be twice to three times the size of the inside diameter of the compressed air hose.
- Secure the compressed air hose against undesired movements using a compressed air safety device.



**Checking the oil supply**

- Hold a piece of paper in front of the exhaust air vent in the motor housing when the machine is running.

The oil supply is sufficient when oil spots appear.

## 5.4 Replacing fins

Worn fins decrease machine performance.

- Have the fin set checked and replaced as needed by a qualified technician.

**Information**

Only use original replacement parts and observe the information on the rating plate.

## 5.5 Cleaning the strainer

Dirty strainers decrease machine performance. Clean the strainer, which is screwed into the connection piece (328), every 10 operating hours. (For an illustration of the positions 328 (= "connection") and 329 (= "nipple"), see the replacement parts list.)

1. Unscrew the strainer and blow it out with compressed air.
2. Screw the strainer back in.

## 6. Original accessories and wearing items

TruTool N 350	Supplied original accessories	Wearing parts	Options	Order No.
Set of tools (punch and die, mounted)	+			
Punch	+	+		0093538
Punch for high-tensile sheets		+		0103545
Die	+	+		0093536
Die for high-tensile sheets		+		0103546
Rapid-release coupling (machine-side part)	+			0114094
Rapid-release coupling (hose-side part)	+			0114095
Handle	+			0257239
Lubricating grease "G1"			+	0139440
Operator's manual	+			0255697
Safety instructions (printed in red)	+			0373678
Case	+			0982540
Fin set (4 x)		+		0119972
Chip bag			+	0097210
Punching and nibbling oil for steel (0.5 l)			+	0103387
Punching and nibbling oil for aluminum (1 l)			+	0125874
Guide			+	0104587
Suspension eyelet			+	0097208
Spacer sleeve for ≤ 2 mm sheet			+	0110104

Table 7

### Ordering original parts and wearing parts

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

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).
4. Send the order to the TRUMPF representative office. Refer to the address list at the end of the document for TRUMPF service addresses.