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Product note

ATC Automatic Tool Calculation

12088836

TRAUB TNL20
TRAUB TNL32

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Note on applicability

Illustrations in this publication may deviate from the product supplied. Errors and omissions due to technical progress expected.

A word on copyright

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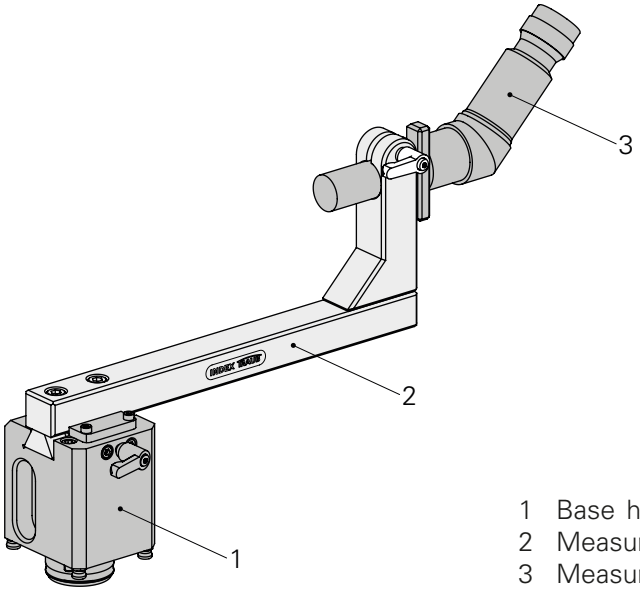
ATC

Automatic Tool Calculation

Automatic Tool Calculation (ATC) is designed for TRAUB TNL20 and TRAUB TNL32 machines.

It allows direct measurement in the machine area for tools on the upper or lower tool turret including the front working attachment.
The TRAUB TNL20 also allows direct measurement on the rear end machining unit.

The device consists of a base holder (1) which is mounted on a tool turret, and a detachable measuring arm (2) with a measuring lens (3).



1 Base holder
2 Measuring arm
3 Measuring lens

Software specially designed for the ATC supports the measurement and storage of the determined values in the tool data set.

The prerequisite for Automatic Tool Calculation is the TX8i-s control with software release 08.02.08 08 (02.2020).

An INDEX service technician is required before initial commissioning of Automatic Tool Calculation.

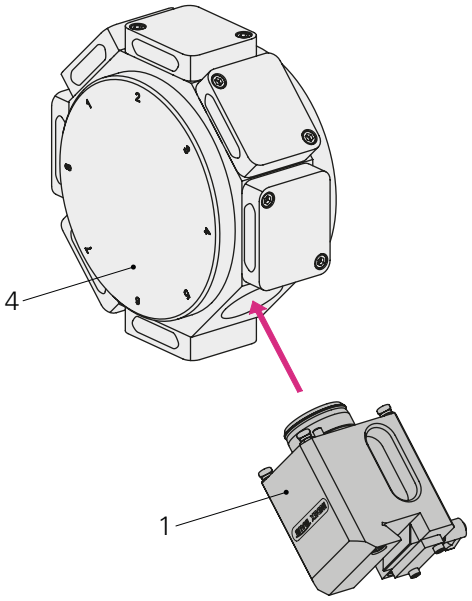
ATC

Structure and function

Installation of the base holder

- The base holder (1) can be mounted on the upper tool turret (4) or lower tool turret (5) in any tool turret station.

Upper tool turret



1 Base holder
4 Upper tool turret
5 Lower tool turret

Lower tool turret

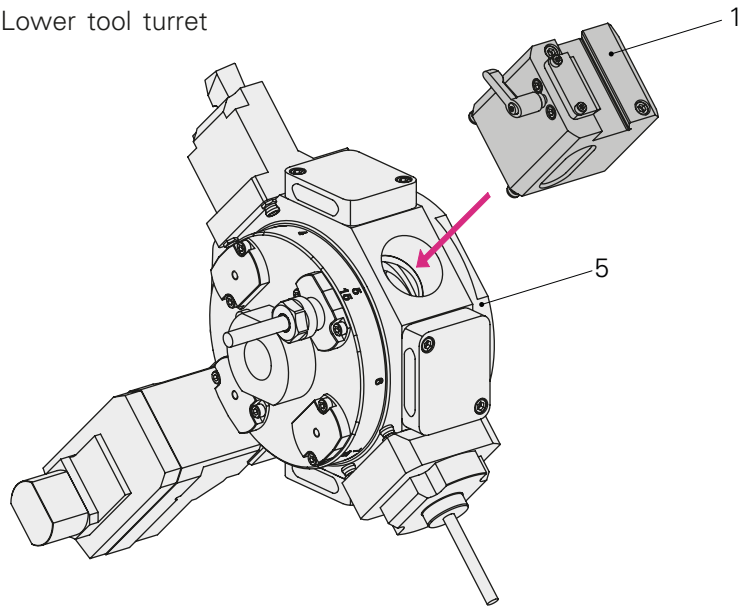


Illustration exemplary, applicable to TRAUB TNL20 and TNL32

ATC

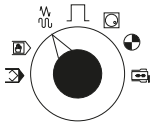
Structure and function

Specification in the control - part 1

- Machine must be switched on.
- Drivers must be switched on.

- Key switch must be in position 1 "Setup mode".

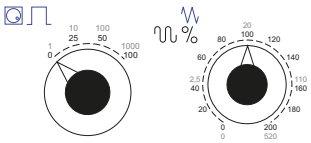
- Subsystem must be activated on the touch panel.



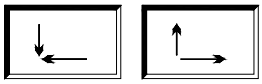
- Set the operating mode selector switch to the Jog symbol.

- Select *F0* screen mode on the touch panel.
- Select tool carrier.
  Select the respective tool turret using the keys on the numeric keypad.

- Press softkey F1 to activate *Index 1 station*.



- Indexing speed is controlled via the override switches rapid traverse and feed rate.



- Perform the index movement using the setup buttons on the machine operating panel.

> If the work area door is open, press and hold the confirmation key.

- Activate screen mode *TOOL/PARA*.

- Press softkey F2 *T-Data*.

- Press softkey F5 *Determine T-data*.

- Press softkey *Turret ATC*.

- Press softkey F2 or F3 *Block optics tur. 2* or *Block optics tur. 3*.

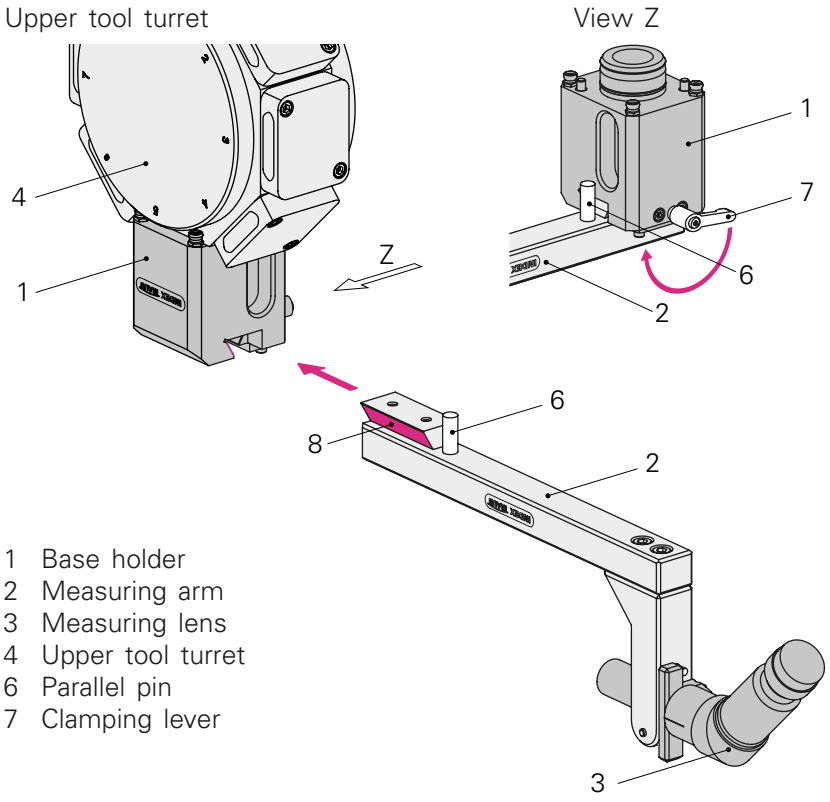
> Tool turret with mounted base holder (1) must be blocked.

ATC

Structure and function

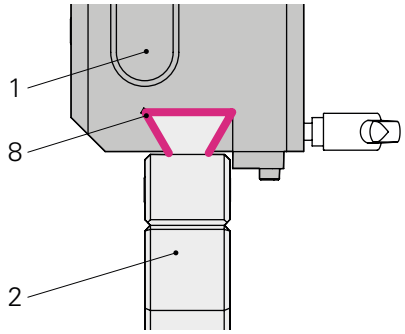
Mounting measuring arm with measuring lens in base holder

- Push the measuring arm (2) into the mounted base holder (1) until the parallel pin (6) is in contact with the base holder (1).
- Fix with clamping lever (7).



1 Base holder
2 Measuring arm
3 Measuring lens
4 Upper tool turret
6 Parallel pin
7 Clamping lever

When clamping, make sure that the dovetail contact surfaces (8) are free of dirt and are in contact with the guide.



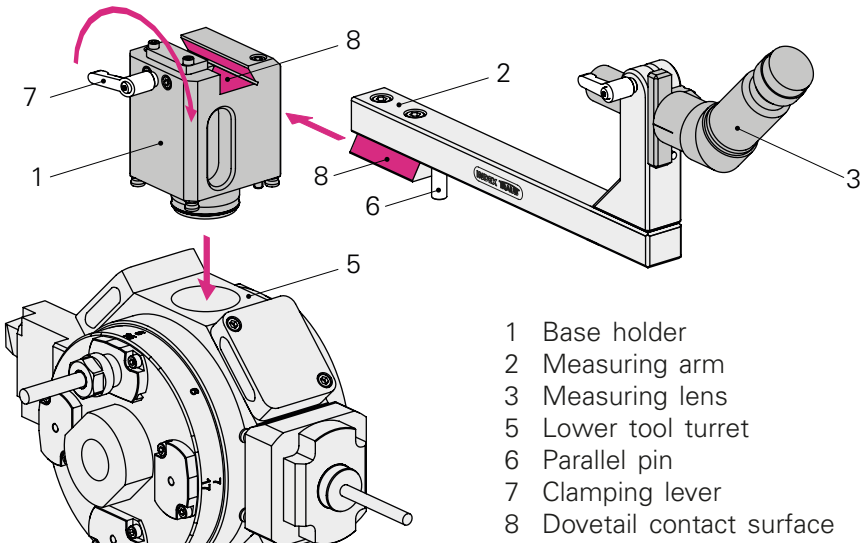
1 Base holder
2 Measuring arm
8 Dovetail contact surface

Illustrations exemplary, applicable to TRAUB TNL20 and TNL32

ATC

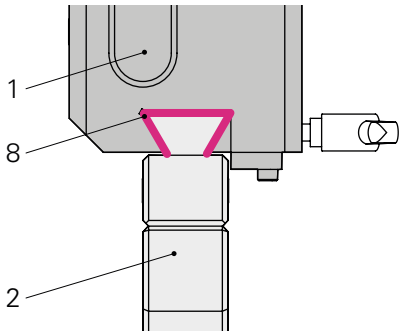
Structure and function

Lower tool turret



1 Base holder
2 Measuring arm
3 Measuring lens
5 Lower tool turret
6 Parallel pin
7 Clamping lever
8 Dovetail contact surface

When clamping, make sure that the dovetail contact surfaces (8) are free of dirt and are in contact with the guide.



1 Base holder
2 Measuring arm
8 Dovetail contact surface

Illustrations exemplary, applicable to TRAUB TNL20 and TNL32

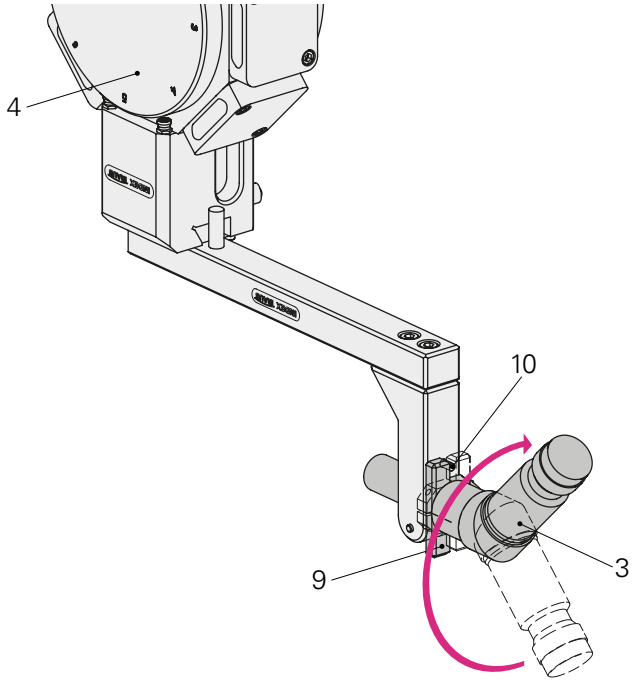
ATC

Structure and function

Rotating the measuring lens

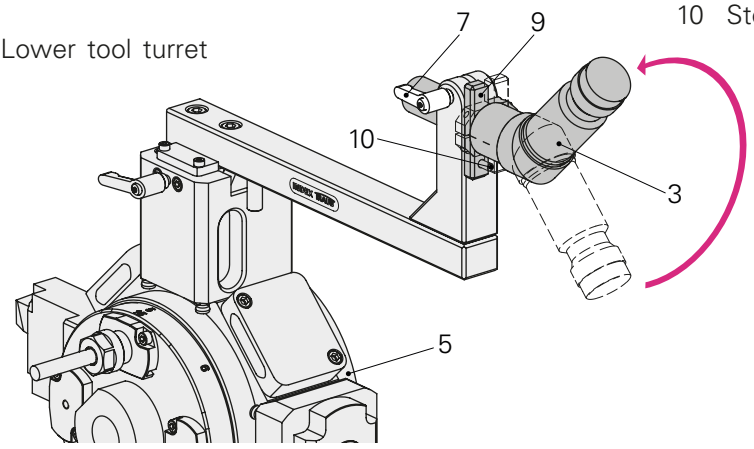
- When converting Automatic Tool Calculation to the other tool turret, the measuring lens (3) must be rotated by 180°.
- Loosen clamping lever (7).
- Rotate the measuring lens (3) with fixed clamping stop (9) by 180°.
- Attach clamping stop (9) to stop pin (10).
- Tighten the clamping lever (7) again.

Upper tool turret



3 Measuring lens
4 Upper tool turret
5 Lower tool turret
7 Clamping lever
9 Clamping stop
10 Stop pin

Lower tool turret



Illustrations exemplary, applicable to TRAUB TNL20 and TNL32

ATC

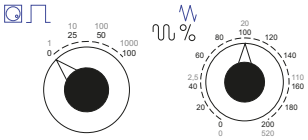
Structure and function

Specification in the control - part 2

- *TOOL/PARA*

- In the *T-Data* (softkey F2), scroll to the tool holder to be measured.

- Press softkey F6 *Index T data* to swivel the tool carrier or front/back working attachment to Automatic Tool Calculation.



- Move the tool holder (11) to be measured into the optics crosshairs by moving the X and Z axes with the override switches.
  If necessary, the focus can be adjusted with the Y axis or adjusting screw on the measuring lens.

- Via softkey *ATC*, the control calculates the positions of the X and Z coordinates on the basis of the tool carriers currently involved and writes them into the input line. Cutting radius, quadrant, and comments can be added.

- With *Input*, the values from the input line are applied to the T-data.
  This clears the input line.

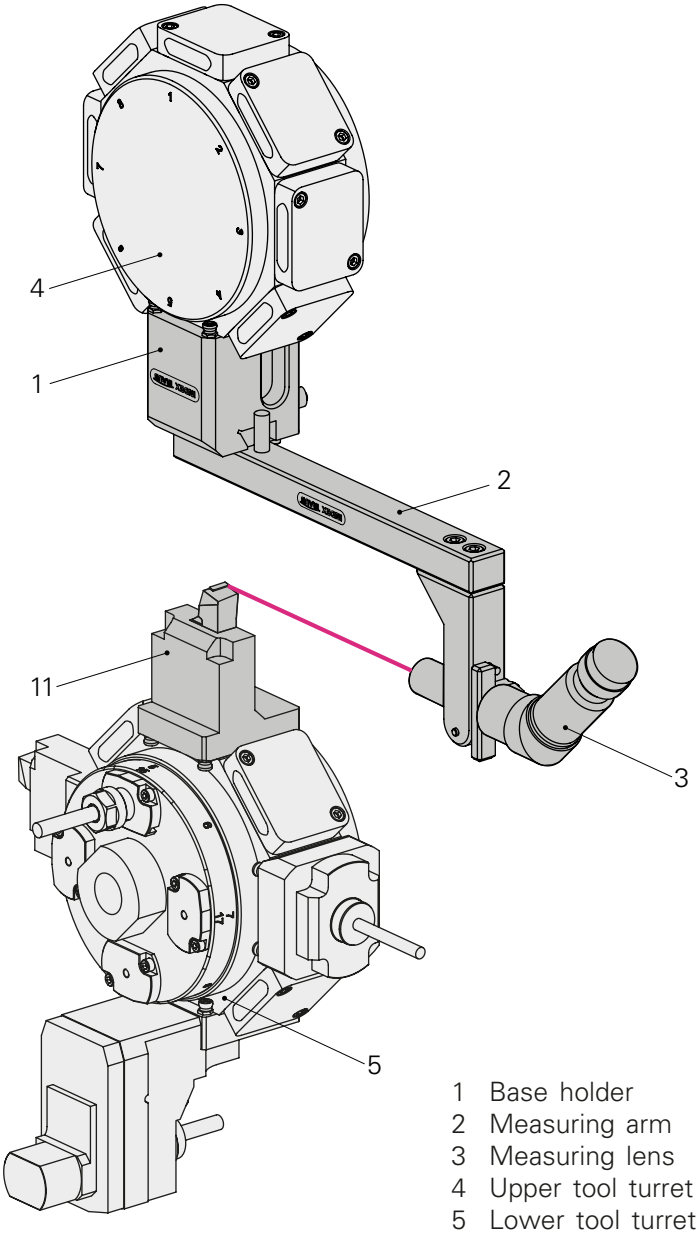
After the measuring process, remove the measuring arm (2) with the measuring lens (3).

- Deselect softkey F2 or F3 *Block optics tur. 2 or Block optics tur. 3*.

- The tool turret can be swiveled to disassemble the base holder.

Measurement of tool holder on lower tool turret

ATC on upper tool turret, for TRAUB TNL20, TNL32

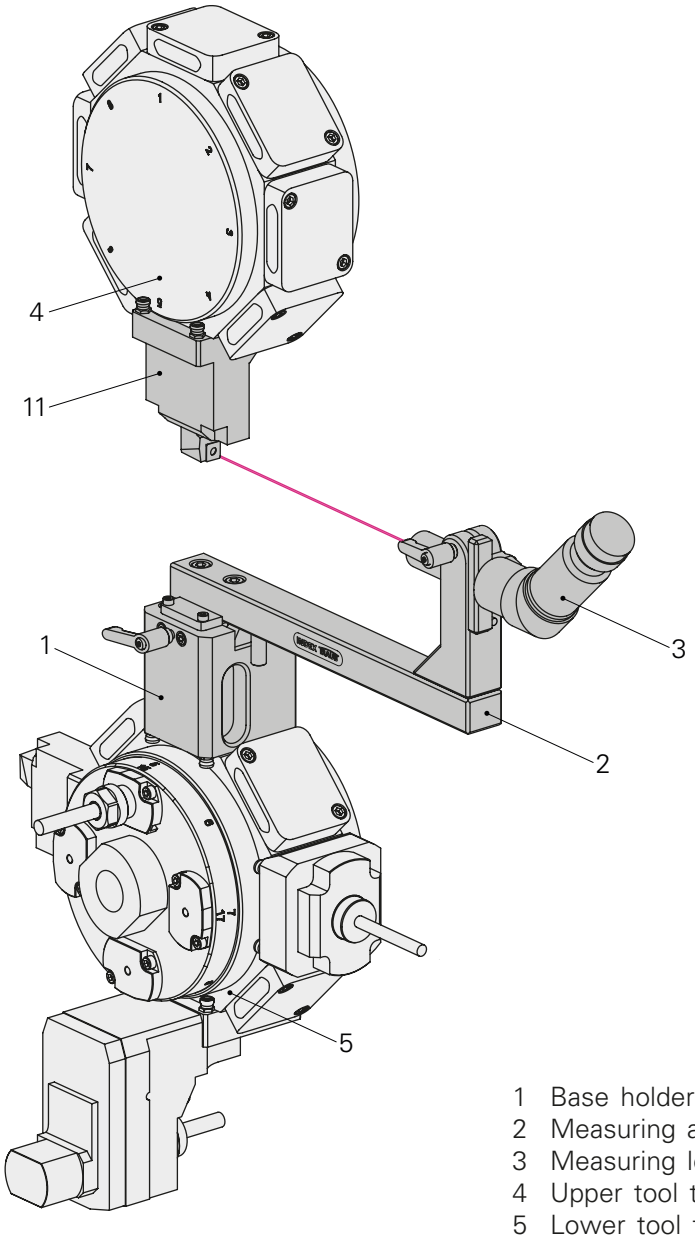


1 Base holder
2 Measuring arm
3 Measuring lens
4 Upper tool turret
5 Lower tool turret
11 Tool holder

Illustration exemplary, applicable to TRAUB TNL20 and TNL32

Measurement of tool holder on upper tool turret

ATC on lower tool turret, for TRAUB TNL20, TNL32

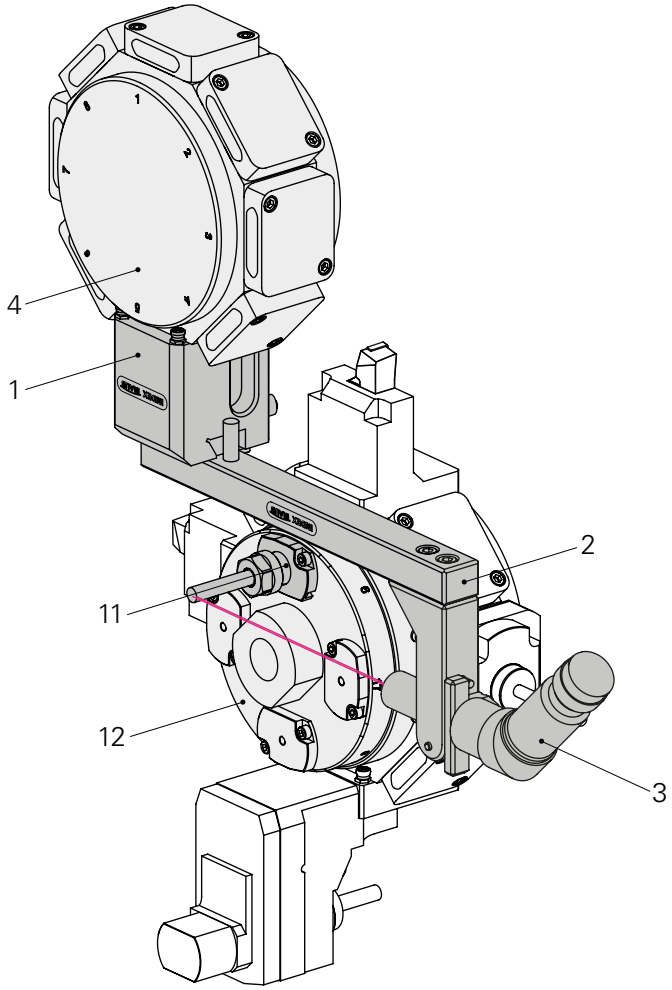


1 Base holder
2 Measuring arm
3 Measuring lens
4 Upper tool turret
5 Lower tool turret
11 Tool holder

Illustration exemplary, applicable to TRAUB TNL20 and TNL32

Measurement of tool holder on back working attachment

ATC on upper tool turret, for TRAUB TNL20-9, TNL20-11



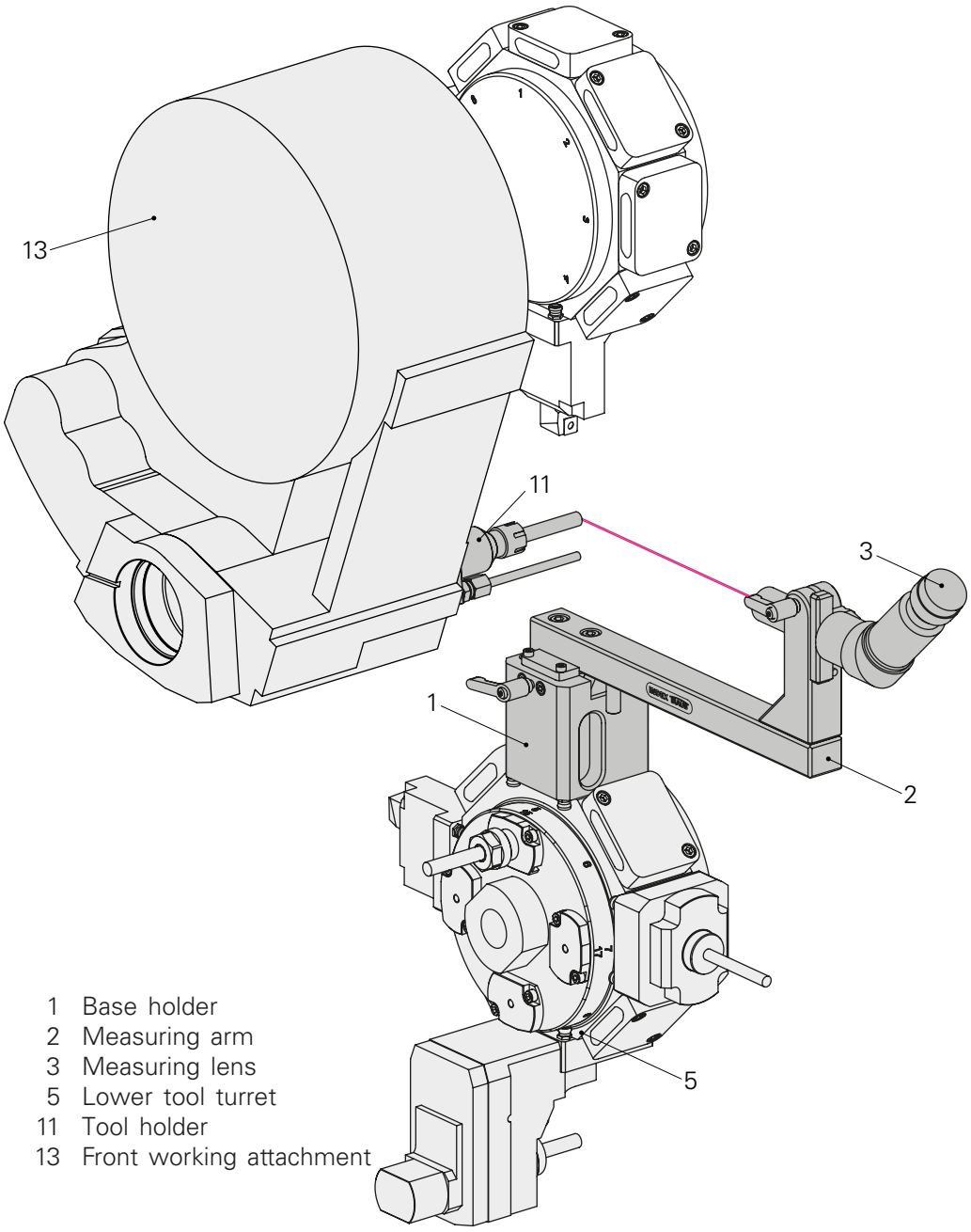
1 Base holder
2 Measuring arm
3 Measuring lens
4 Upper tool turret
11 Tool holder
12 Back working attachment

Measurement of tool holder on back working attachment not possible with TRAUB TNL32P, TNL32-7, TNL32-7B

Illustration applicable only to TRAUB TNL20

Measurement of tool holder on front working attachment

ATC on lower tool turret, for TRAUB TNL20-11



1 Base holder
2 Measuring arm
3 Measuring lens
5 Lower tool turret
11 Tool holder
13 Front working attachment

Illustration applicable to TRAUB TNL20-11

Measurement of tool holder on front working attachment

ATC on upper tool turret, for TRAUB TNL32-11

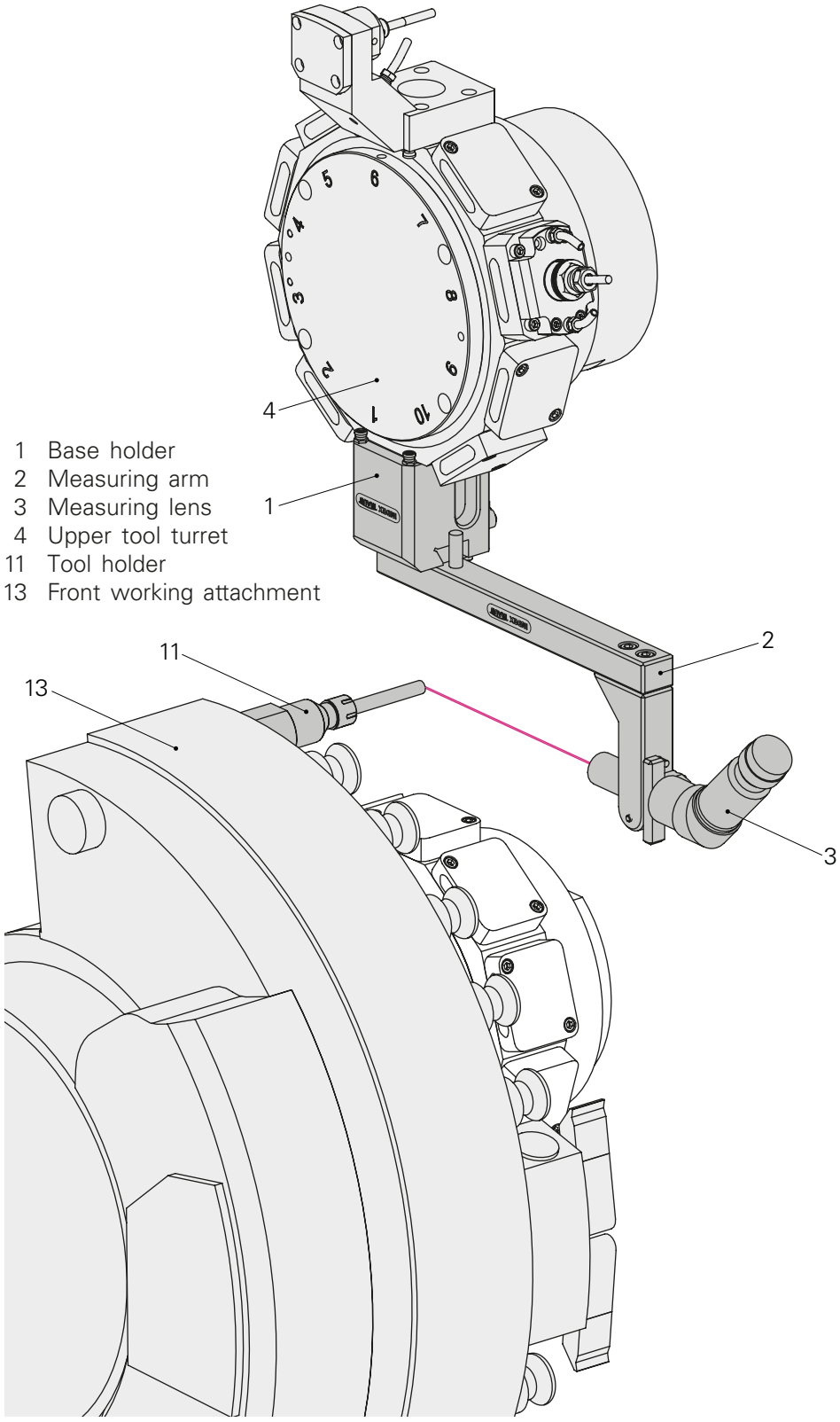


Illustration applicable to TRAUB TNL32-11

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