



Eagle

AOTP・A type

Contactless Optical Tool Presetter **Aegis-i** Series



**A tool presetter developed completely in-house
with the customer's ease of use in mind!**

**TIME
SAVING**

Cutting tools can be clamped on the machine!

- No need to go back and forth between presetter and clamber!
- **NEW** Compatible with milling chuck! (Tightening torque up to 100Nm max.)

*Since the tightening torque with HSK100A and UTS10080 is up to 60Nm MAX,
only collet holders are supported and milling chucks are not supported.



- Software can be customized to meet your requirements.
- Easy operation reduces human errors.
- Contactless measurement does not damage cutting edges.
- Cutting tools in various shapes can be measured.

Max Measurement

X-axis $\phi 400\text{mm}$

Z-axis 500mm

**Easy to use! Well thought out operational design.
Designed by customer's input / feedback.**

User Friendly Body Design



Milling chucks can be tightened on-machine*.

Move the camera away from the spindle when tightening.
* Capable of tightening torque up to 100 Nm.
* Since the tightening torque with HSK100A and UTS10080 is up to 60Nm MAX, only collet holders are supported and milling chucks are not supported.

Enables the following processes.

- Correct cutting tool sinkage.
- Adjusting the projection length of the cutting tool.
- Measuring Runout.

Mechanical Clamp

400kgf (0.5MPa) air cylinder firmly clamps the tool holder. Good repetitive accuracy of tool holder clamping/unclamping.

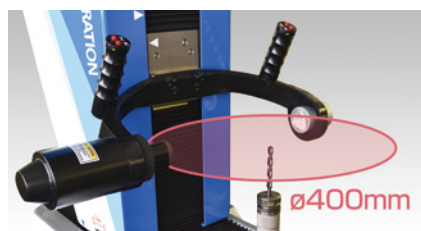
Motor driven

Spindle rotation is performed automatically.



Camera Handle

Simple one hand operation.
Movable in X-axis direction or Z-axis direction separately/simultaneously.



Camera Arm

Measurement up to ø400mm is possible.



NEW Lens Guard

Protects the lens from accidental impact.



Fine Adjustment Dial for Z-axis / X-axis

Quick camera positioning by rotating the dial.



Cutting Tool Height Adjustment (Option)

An operation handle for cutting tool height adjustment can be added.



Adapter Trays are included.

Frequently used adapters and holders can be placed nearby.

Easy-to-use Software with Tutorial Function.

Suitable for inexperienced operator!
Tutorial can be displayed by one click.

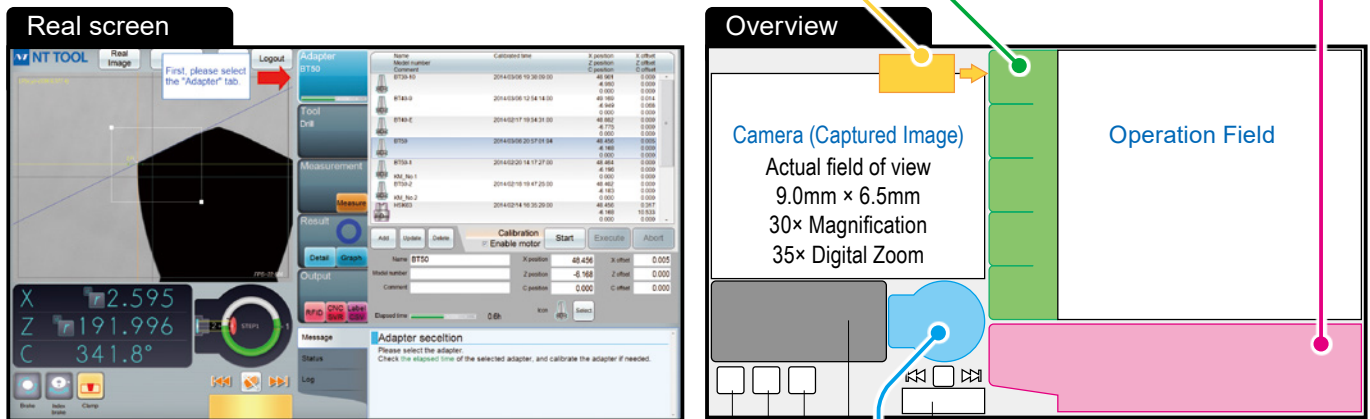
Never operated? Don't worry!
The machine guides you on what to do!

Operation screen lined up in
working sequences!

Well thought out layout of the
operation screen
minimizes operation time.

Just follow commands on the
message screen!

Information about current operational
status and function in use are shown
in the special field.



Brake

Spindle can be stopped at any location.

Index Brake

Spindle can be pin-locked every 90 degrees.

Clamp / Unclamp

Coordinates

X=Radius/Diameter, Z=Height, C=Rotational Position.

*X and Z values indicate position of the
camera center when not measuring.

Spindle Control

Forward / reverse to the next / previous
cutting edge.



: Free the motor.

You can also touch and swipe to
Spindle can be rotated as desired by
touching and swiping the spindle.

"Magic Eye" shows the positions of cutting edges.

Shows position of cutting edge in real-time.

Beginning of measurement

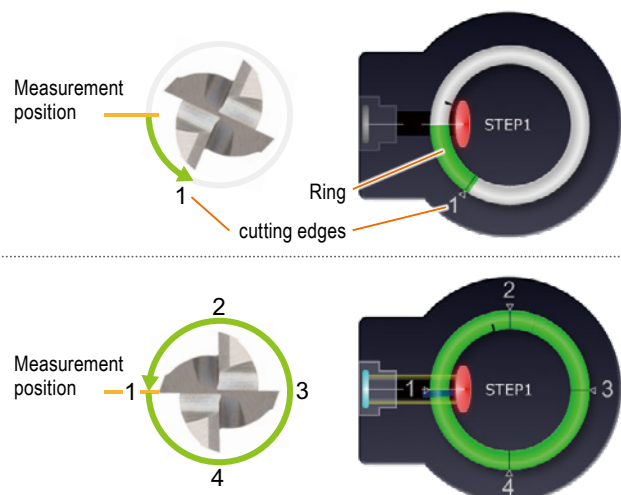
The ring turns green in accordance with cutting
tool rotation. Numbers are assigned on the
detected cutting
edges.

Detection of cutting edges completed.

Target cutting edge is always clear even with
endmills and facemill cutters.

Actual cutting edges

Magic eye

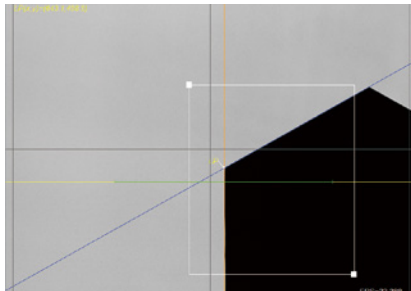


Measurement function

Runout Measurement of The Cutting Edge

Capture the area you want to measure.
Then, turn the spindle.

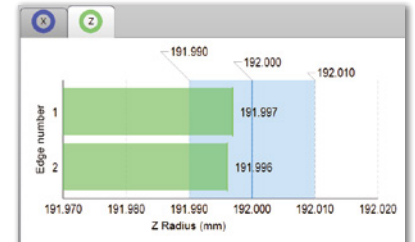
The measurement result against target value can be shown as ○ (good) and × (bad), along with sound effects. The result can be also shown as a graph.



○: Good, ×: Bad

	X axis	Z axis	Radius	Angle 1	Angle 2	C axis
Upper tol.		0.010				
Target		192.000				
Lower tol.		-0.010				
1	2.599	191.997			162.9°	
2	2.595	191.996			341.8°	
Δ	0.004	0.001				

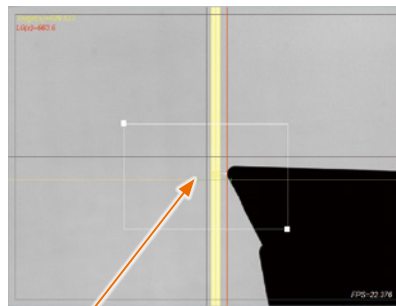
Measurement result



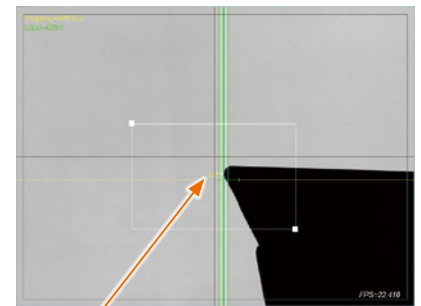
Graph

Tolerance Area Display

The tolerance area is displayed on the screen for easy adjustment of the boring bar diameter.



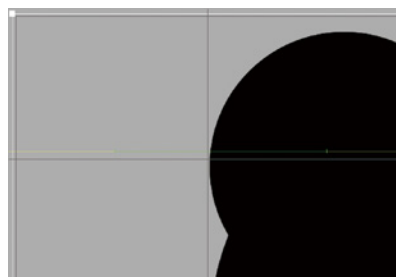
The yellow line is the tolerance area.



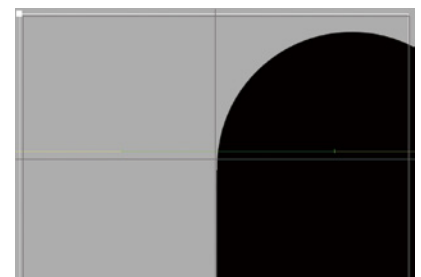
The tool edge will turn green when it enters within the tolerance area.

Measuring Afterimage

The cutting tool's profile is plotted by rotating the spindle 360 degrees.



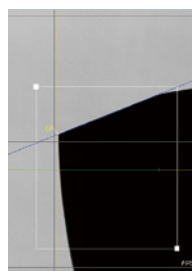
Before afterimage measurement



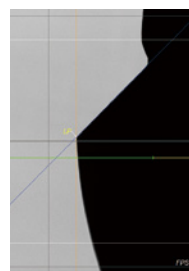
After afterimage measurement (afterimage of rotated tool is shown.)

Measuring Step Drill

Each step can be measured separately.



Step 1



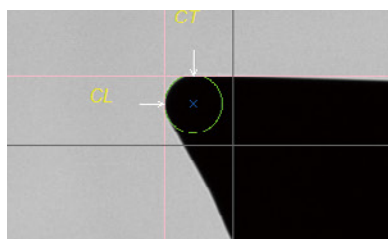
Step 2

←Tab

	X axis	Z axis	Radius	Angle 1	Angle 2	C axis
Upper tol.						
Target						
Lower tol.						
1	3.255	211.729			71.2°	
2	3.251	211.705			252.3°	
Δ	0.004	0.024				

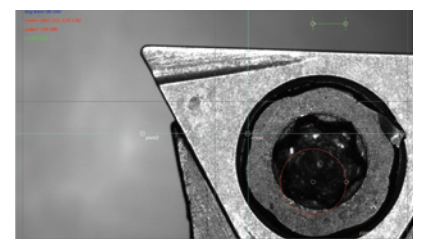
Measuring Radius

Nose-radius can be measured based on the contour of the cutting edge.



Real image of Cutting Edge

Wear and chipping on cutting edge can be inspected.

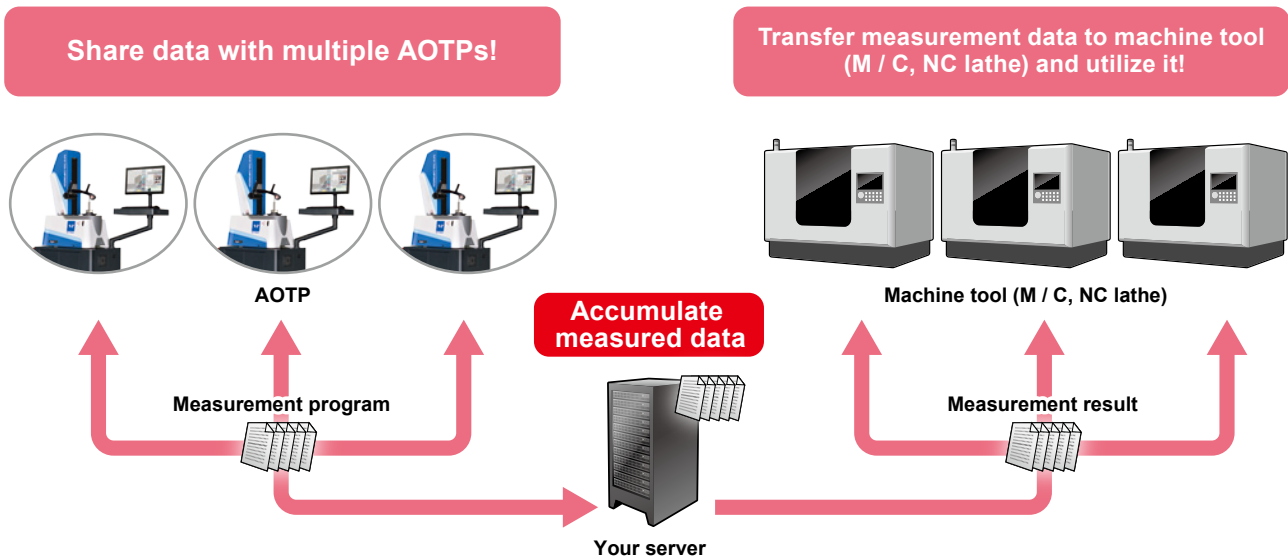


Customization Case

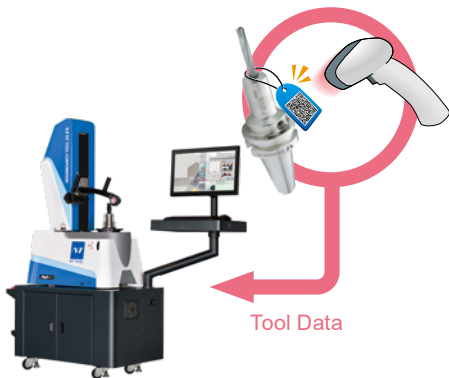
① Sharing Measurement Data

The AOTP measurement data can be customized to be saved onto your server. Measurement data accumulated in the saved server location, then can be shared with connected AOTP devices, or transferred to a machine system (M / C, NC lathe) for use. *The machine system side needs data sharing capability with the server to perform the task.

By accumulating the measurement data of an individual AOTP in your server, you can...



② Using QR Codes to Create Faster, More Efficient Processes



Procedure

- ① Register the tool data (Measurement, contents, etc.) of each holder into its own individual QR code. Then attach the corresponding code to the matching holder with a tag or other method in advance.
- ② When measuring each holder, scan the QR code into the presetter, it will instantly display the tool data (measurement, contents, etc.) on the presetter screen and start the measurement process immediately.

Merit

The operator will not need to search for the tool information from a list, or other time consuming method. This makes it possible to eliminate human error, such as selection mistake.



Presetter

Booster valves and tanks

AOTP-A

Model	Retention Stud	
	BT	CAT
AOTP-500A-1AM	PSB-7(MAS-1), PSB-8(MAS-2), PSB-14, PSB-19, PSB-27, PSB-28, PSB-29, PSB-33, PSB-35, PSB-36, PSB-39, PSB-7-CH, PSB-8-CH	—
AOTP-500A-1CM	PSB-17	—
AOTP-500A-2DM	PSB-24	PSC50-1
AOTP-500A-2EM	PSB-50P(JIS), PSB-37	—

- Please select a model based on the retention stud type.
- Retention stud not shown in the above chart can be also used. Please contact NT Tool Corporation for details.

Unit Options

	Standard	Option
Cutting Tool Height Adjustment	—	Height adjustment handle can be added to the front.

In addition to those options, customization of software and body is possible upon request. Please contact NT TOOL for details.

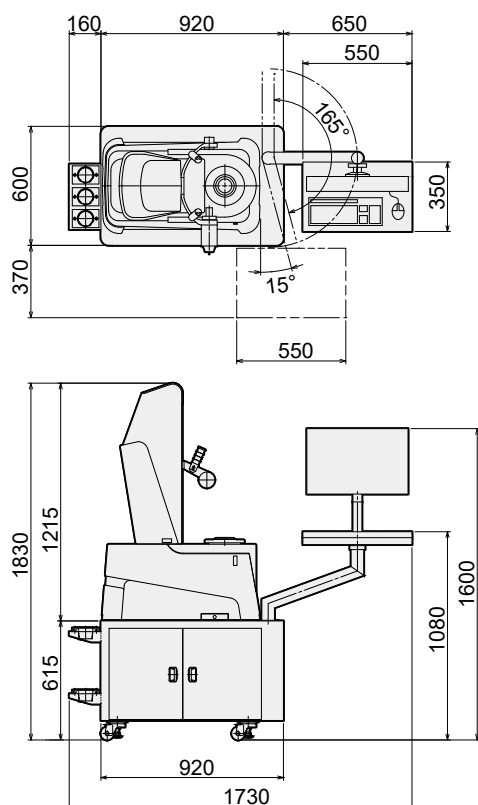
Ordering Example

AOTP-500A-1AM ○

Without cutting edge height adjustment : Leave blank

With cutting edge height adjustment : Add "P"

Specifications of AOTP-A



External Dimensions	1730mm x 600mm x 1830mm (WxDxH)
Weight	300kg
Power Supply	100 ~ 240V AC, 50/60Hz
Power Consumption	300W
Air Pressure	0.35 MPa or more
Measurement	X-axis : $\varnothing 400\text{mm}$ Z-axis : 500mm *
Minimum Reading	0.001mm
Spindle Size	BT50 (Adapters for different spindle sizes available.)
Clamp Method	Mechanical clamp
Specifications of Camera	1.3 million pixel CCD monochrome
Screen Magnification Ratio	30× Magnification
Display Size	21.5"
Cutting Edge Measurement Range	9.0 x 6.5mm
Menu Manipulation Method	Touch panel, mouse, keyboard
Language Selection	English, Japanese, Korean, Chinese, Spanish
Accessories	Adapter tray, Cover, Cleaning putty, Booster valves and tanks

- * The measurement range of the Z-axis is narrowed by adapter's thickness.
- Switchable between Inch and Metric display.
 - Specifications and design of the product are subject to change without notice.

Adapters (Sold Separately)

NEW Rustproof case



It can be placed on the presetter's adapter tray with the rustproof case still attached.

For BT, CAT and SK



BT30, BT40, CAT40, SK40

*Please designate the type of retention stud in use.

For HSK



• HSK25E, HSK32E
• HSK32A, HSK40A, HSK50A, HSK63A, HSK100A

For UTS



UTS5040, UTS6350, UTS10080

For C



C3, C4, C5, C6

Accessories

Label printer (Sold Separately)

Thermal printer. No need for cartridges. Measured values can be printed. Tool name, model, and comments registered beforehand can be printed together.

Code

Model

Note

4944 10000018

AOTP-PRINT-BRO2

Power supply
AC100V 50/60Hz 2.0A

4944 10000019

AOTP-PRINT-BRO3

Power supply
AC100-240V 50/60Hz 1.5A

Label for printer (Sold Separately)

Code

Model

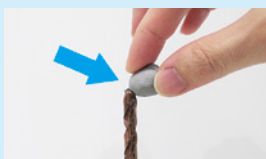
Note

4944 10000020

AOTP-PRINT-BRO2-LA

Approx. 400 labels. Label size : 29 x 90 mm

Cleaning putty (Included with presetter)



Code

Model

Note

4944 10000013

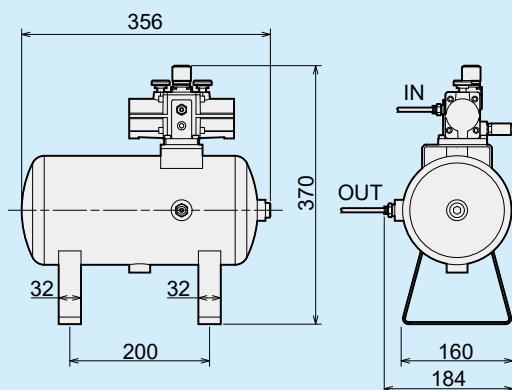
AOTP-DUST-C

To clean the cutting edge for accurate measurement.

Booster valves and tanks

(Included with presetter)

Note



This is a pressure increasing valve and tank to secure the air pressure required for tightening on the machine.

Contactless Optical Tool Presetter



Series

Falcon

SOTP type

Simple and compact! High performance presetter - affordable price!



Collet holder nut can be tightened on the machine. * MAX 60 Nm



Max Measurement

X-axis : $\varnothing 300\text{mm}$

Z-axis : 400mm

Mechanical Clamping

A pneumatic cylinder clamps the holder securely in place, guaranteeing excellent accuracy through repeated mounting of holders.

Contact / Projection Type Tool Presetter



NTP-400

- Column Movement Method
Lever (Auto)
- Measurement Range
X-Axis : 0~ $\varnothing 400\text{mm}$
Z-Axis : 50~500mm



NTP-300A

- Column movement method
Handle (Manual)
- Measurement range
X-axis : 0~ $\varnothing 300\text{mm}$
Z-axis : 50~500mm

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