

# NEW!

**SUGINO**  
SUPER! TECHNOLOGY

## With Automatic Tool Diameter Adjuster

# SUPEROLL MAC

Equipped with an automatic tool diameter adjusting feature, this burnishing tool automatically tracks the pre-hole diameter, enabling stable finishing surface.



↑ You can see machined videos of MAC from here.



SH1000-CAT



SH Type

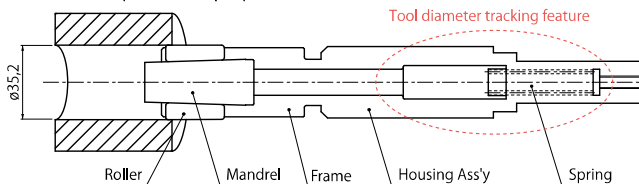


SB Type

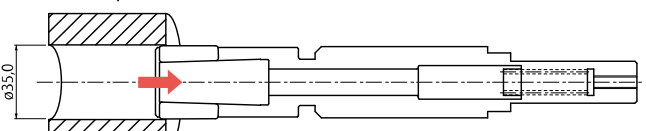
### Features

- Automatic tool diameter adjustment with stable burnishing results. (Diameter tolerance is up to 0,2mm )

■ In case the pre-hole is proper for the tool diameter.



■ In case the pre-hole is too small for the tool diameter.

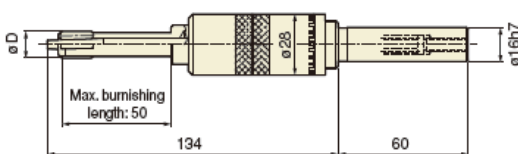


**Mandrel moves back**

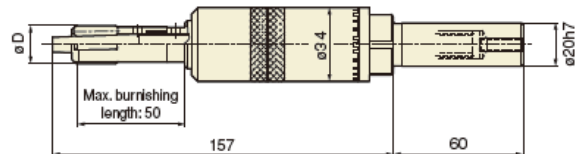
- Improve the tool life
- Can be used in holes with small taper or step.
- Can make plateau surface with better seizure resistance.

### Dimensions(mm)

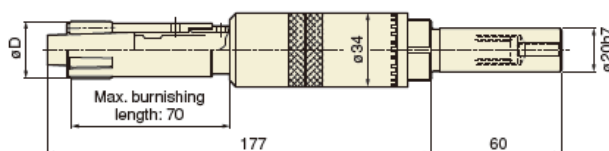
① Tool diameter D  $\phi 4.5 - 14.5$  mm



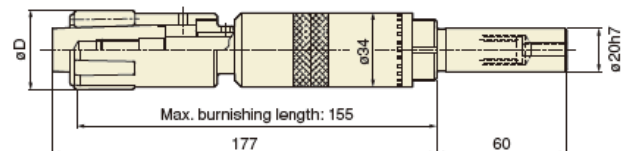
② Tool diameter D  $\phi 15 - 24$  mm



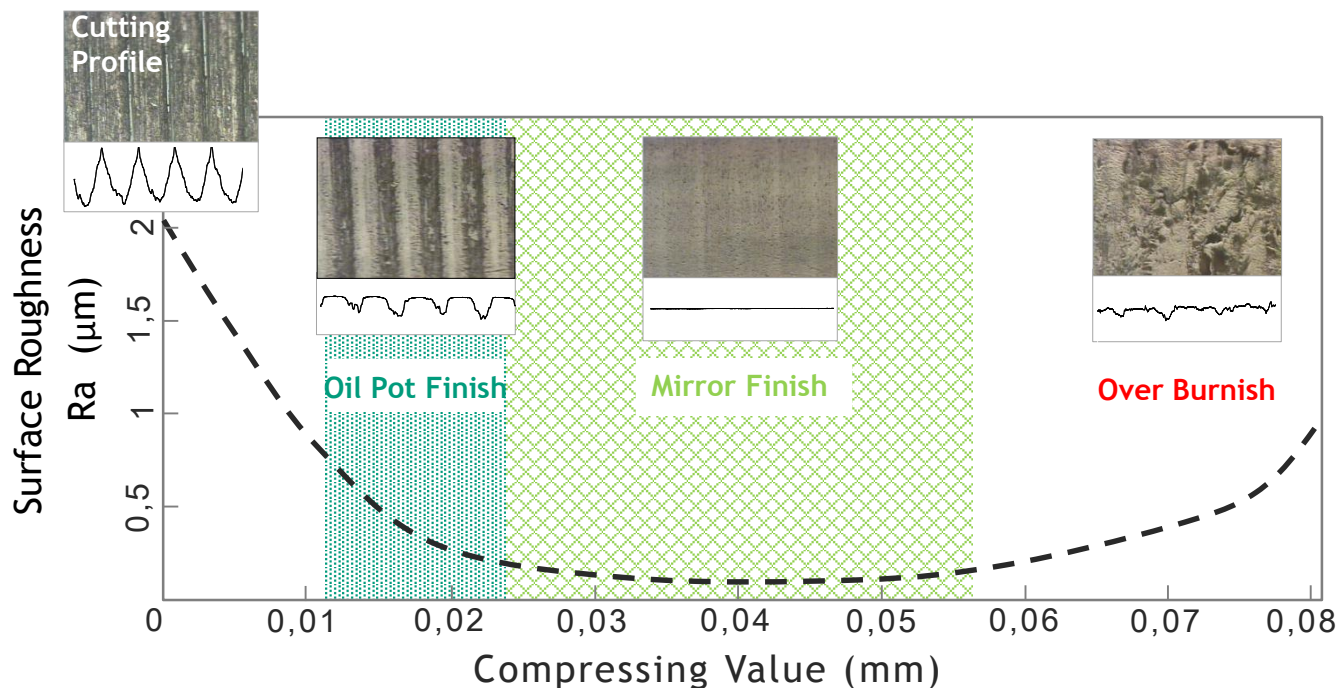
③ Tool diameter D  $\phi 25 - 34$  mm



④ Tool diameter D  $\phi 35 - 44$  mm



## Comparison of Burnishing Results



## Burnishing Result

With normal burnishing tool, the compressing value is influenced by the machined diameter. With our Superroll Mac, burnishing result becomes stable within 0,2mm tolerance.

	Cutting Profile	Dia.35,20	Dia.35,05	Dia.35,00
Normal Superroll	<p>曲線=R.ISO - 箇所=[1] Ra 2,21<math>\mu\text{m}</math> Rpk 2,74<math>\mu\text{m}</math> Rvk 0,86<math>\mu\text{m}</math></p>	<p>曲線=R.ISO - 箇所=[1] Ra 2,21<math>\mu\text{m}</math> Rpk 2,74<math>\mu\text{m}</math> Rvk 0,86<math>\mu\text{m}</math> <b>No influence</b></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,05<math>\mu\text{m}</math> Rpk 0,04<math>\mu\text{m}</math> Rvk 0,16<math>\mu\text{m}</math> <b>Mirror Finish</b></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,65<math>\mu\text{m}</math> Rpk 0,56<math>\mu\text{m}</math> Rvk 2,02<math>\mu\text{m}</math> <b>Over Burnish</b></p>
Superroll Mac (Weak Setting)	<p>曲線=R.ISO - 箇所=[1] Ra 1,85<math>\mu\text{m}</math> Rpk 2,89<math>\mu\text{m}</math> Rvk 1,48<math>\mu\text{m}</math></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,26<math>\mu\text{m}</math> Rpk 0,07<math>\mu\text{m}</math> Rvk 1,08<math>\mu\text{m}</math> <b>Oil Pot Finish</b></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,23<math>\mu\text{m}</math> Rpk 0,06<math>\mu\text{m}</math> Rvk 1,03<math>\mu\text{m}</math> <b>Oil Pot Finish</b></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,31<math>\mu\text{m}</math> Rpk 0,05<math>\mu\text{m}</math> Rvk 1,28<math>\mu\text{m}</math> <b>Oil Pot Finish</b></p>
Superroll Mac (Strong setting)	<p>曲線=R.ISO - 箇所=[1] Ra 2,18<math>\mu\text{m}</math> Rpk 2,97<math>\mu\text{m}</math> Rvk 1,04<math>\mu\text{m}</math></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,04<math>\mu\text{m}</math> Rpk 0,03<math>\mu\text{m}</math> Rvk 0,10<math>\mu\text{m}</math> <b>Mirror Finish</b></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,04<math>\mu\text{m}</math> Rpk 0,04<math>\mu\text{m}</math> Rvk 0,09<math>\mu\text{m}</math> <b>Mirror Finish</b></p>	<p>曲線=R.ISO - 箇所=[1] Ra 0,03<math>\mu\text{m}</math> Rpk 0,03<math>\mu\text{m}</math> Rvk 0,08<math>\mu\text{m}</math> <b>Mirror Finish</b></p>

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[www.sugino.com](http://www.sugino.com)

Sugino Machine France S.A.S.  
TEL +33-1-84-17-49-87  
[contact@sugino.eu](mailto:contact@sugino.eu)

Sugino Machine Limited-Praha, Branch Office  
TEL +420-257-950-228  
[info@sugino.cz](mailto:info@sugino.cz)

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