

**SCHUMACHER**  
PRECISION TOOLS SINCE 1918

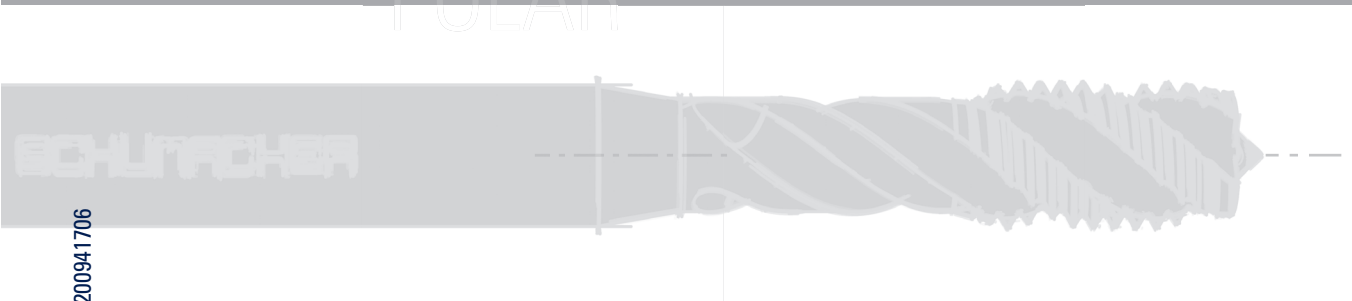
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POLAR



W1200941706

Developed by ToolDesign

**SCHUMACHER**  
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**POLAR**

The Specialist for Stainless Steel



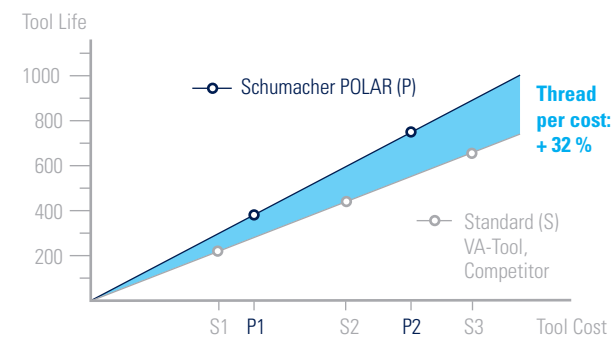
## Serial Production of Stainless Steels – the Domain of POLAR

During an 18-month project, SCHUMACHER's R+D team has developed a new geometry for stainless materials. The result is a new specialized tool for advanced serial threading in stainless steel.

### Steps of the Project

1. Digital design of new geometry variants and simulation procedure in digital work piece material
2. Start of sample production to verify performance of new geometry designs in long-term test applications
3. Selection of advanced customers to thoroughly check upon suitability of POLAR under actual operating conditions.

Cost Benefit Ratio: + 30 % Increase with Schumacher POLAR



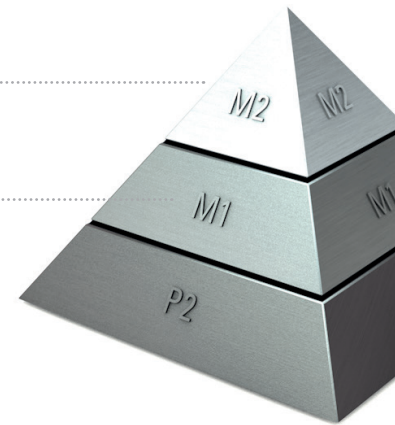
### Austenitic - Ferritic

x2 CrNiMoN25 [Duplex]  
x2 CrNiMoN22

### Austenitic

x5 CrNi [1.4301]  
x6 CrNiMoTi 1712-2 [1.4571]

### Ferritic Martensitic



### Targeting ISO-material groups P2, M1, M2

Drawing upon a technical university from Germany, the following characteristics were defined:

- Process stability throughout defined tool life duration
- Improved Wear Resistance of Tool
- Increase of tool life
- Increase of cutting speed
- Reduction of chip problems and avoidance of disproportionate increase of torsional moment

### The Properties of Polar

- Advanced PM-Substrate
- Geometry with new combination of cutting angle and relief
- 45° spiral flute and extended flute length for optimized performance in deep blind holes
- Special flute design facilitates cutting off process in target materials (long, tough chips)
- Improved conicity of guiding thread part
- Core diameter and width of land optimized to target materials.
- Wear-resistant PVD coating (TiCN)

FOR  
STAINLESS  
MATERIALS

### Service + Support:

SCHUMACHER Service-Hotline: +49 (0) 21 91 97 04-0 | [info@schumachertool.de](mailto:info@schumachertool.de)

P2 M1 M2

