Lowest clamping depth without pre-marking

Thanks to the SinterGrip clamping inserts, it is possible to clamp workpieces safe with a clamping depth of just 3.5 mm, so the workpiece can be completely machined in a single operation. This reduces the cost of materials, particularly where raw material costs considerably influence the piece price. SinterGrip also optimizes the performance of the machine and tools: faster cutting and feeding speeds mean larger cutting volumes and shorter machining times for each workpiece.

In addition, production steps required until now, such as workpiece pre-marking, are no longer necessary. Eliminating the pre-marking process reduces investment costs and saves on upstream processing costs. Considerable time is also saved as the workpiece, it can be clamped immediately by eliminating upstream processes.

The triangular insert with pyramidal teeth penetrates into the material, creating a positive fit between the clamp and the workpiece. The forces and vibrations generated during machining are evenly distributed and absorbed.

SinterGrip comes in 3 different versions for different materials: steel, hardened steel (up to 54 HRC)/titanium and aluminium/plastic. SinterGrip is compatible with all commonly available types of vices and clamping devices.
SinterGrip Clamping Inserts

**SinterGrip Clamping Inserts**
- Lowest clamping depth only 3.5 mm
- No pre-marking necessary
- Highest stability and active vibration absorption
- Increasing of the cutting forces compared to other systems
SinterGrip Clamping Insert

Comparison Clamping Depths

Clamping with SinterGrip

Conventional Clamping Method
>> Lowest clamping depth of workpieces – no pre-marking

Benefits

1. No pre-marking necessary
   - Elimination of the costs for a pre-mark machine and set-up times

2. No pre-machining of the workpiece or clamping surfaces necessary
   - Elimination of the costs for the pre-machining

3. 3 different versions for all materials:
   - Steel
   - Hardened Steel | Titanium (until 54 HRC)
   - Aluminium | Plastic

4. Best accessibility and highest holding forces
   - Safe clamping of workpieces
   - Ideal for 5-axis machining
   - High material saving due to lowest clamping depth only 3.5 mm

5. Maximum lifetime | No wear costs
   - SinterGrip clamping inserts are made from coated carbide steel and have maximum lifetime
   - The inserts are individually exchangeable

6. Pull-down effect | Active vibration absorption
   - Even distribution of the clamping forces and active vibration absorption
   - Form-fitting clamping by means of the SinterGrip inserts
SinterGrip

Clamping Inserts

- Low clamping depth
- High stability and active vibration absorption

Application/customer benefits
- Very low clamping depth (only 3.5 mm) ensures safe clamping of the workpieces: highest efficiency and productivity due to the lower material costs and less machining costs
- No pre-marking necessary: of the costs for a pre-mark machine and set-up times
- Highest stability and active vibration absorption
- Pull-down effect due to the special row of the teeth
- Increasing of the cutting speeds compared to other systems
- Simple manufacturing of jaws for SinterGrip inserts by the customer
- Maximum lifetime

Technical features
- Clamping depth only 3.5 mm
- 3 different versions for steel, hardened steel/Titanium (until 54 HRC) and aluminium/plastic
- Made from coated carbide steel

Order review

SinterGrip STD
Clamping insert for steel
Id. No. 466000

SinterGrip HRC
Clamping insert for hardened steel and Titanium until 54 HRC
Id. No. 466001

SinterGrip ALU
Clamping insert for aluminium and plastic
Id. No. 466002

Consisting of 10 pcs. clamping inserts (without bolts; Order no. SinterGrip bolt-Set 466004)
SinterGrip

SinterGrip Bolt set, consisting of 10 pieces

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Screwdriver T9

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Key T9

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Protection cover aluminium set, consisting of 10 pieces

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<td>SinterGrip</td>
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Pair of jaws, set (incl. 1 pair parallels, wrench torx T9, screws)

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<th>Type</th>
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Version 1: without wolfram-carbide coating
Version 2: with wolfram-carbide coating for a better grip in the 2nd operation (picture)

Number of the needed SinterGrip clamping inserts:
Id. No. 466010 to 466017: 9 pcs. SinterGrip clamping inserts
Id. No. 466018 to 466023: 11 pcs. SinterGrip clamping inserts
SinterGrip milling cutting tool

<table>
<thead>
<tr>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>SinterGrip milling cutter</td>
<td>466003</td>
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Drawing for the pocket to include SinterGrip clamping inserts:
Recommended cutting parameters:
Cutting speed V = 80-120 m/min
Feed force per tooth Fz = 0.02 mm

Manufacturing of jaws for SinterGrip inserts by the customer

1. Shape of the SinterGrip pocket manufactured with SinterGrip milling cutting tool (Id.-No. 466003)
2. Clamping step 3.5x4 mm
3. Jaw made from nitrided steel with a tensile strength of ≈ 980N/mm²

Measurement of the dimensions of the vice
Milling of the jaw to the required height
Drilling of the jaw with the correct distance of the holes
Mounting of the jaw on the vice