HFT System with Octagonal CBN Insert

High Feed Turning HFT with CBN

- **Monoblock Tool Holders in Various Design**
  - Combination possible to adopt to different applications like boring, facing, outer diameter turning, and chamfering.
  - Couplings available as HSK, VDI, PSC and DIN shank.

**Advantages:**
- Special wiper geometry
- High metal removal rates
- Octagonal Insert offers 8 cutting edges
- 8 times higher productivity than conventional hard turning
- Good surface roughness (Rz < 4 µ) even at elevated feed rates of f = 0.047 IPR
- High stiffness monoblock design holders based on HSK, PSC, VDI or DIN coupling
For Hardened Steel
High Feed Turning

General Details

To machine close to shoulder (inner or outer diameter) you need a relief groove of approximately 0.3 in.

Cutting Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>( v_c )</th>
<th>( f )</th>
<th>( a_p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Conditions*</td>
<td>262 – 656 SFM</td>
<td>0.008 – 0.047 IPR</td>
<td>0.002 – 0.010 in</td>
</tr>
</tbody>
</table>

HFT - Offering Production Cost Reduction

Cutting Process Time up to 90 %

Productivity Roughing

<table>
<thead>
<tr>
<th>HFT</th>
<th>Standard</th>
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</thead>
<tbody>
<tr>
<td>( v_c = 492 ) SFM</td>
<td>( v_c = 329 ) SFM</td>
</tr>
<tr>
<td>( f = 0.047 ) IPR</td>
<td>( f = 0.007 ) IPR</td>
</tr>
<tr>
<td>( a_p = 0.005 ) in</td>
<td>( a_p = 0.004 ) in</td>
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</tbody>
</table>

Result: HFT = 12–16 times faster than existing process with keeping the requested tolerances and surface roughness requirements.

Insert offers double number of cutting edges. Additionally, the tool life could be doubled

Application Range

Inner Diameter Boring

- Through hole application is not recommended (blind hole makes chip stacking and jamming).
- Inner diameter has to be more than 50 mm.
- Length of cut should be less than 3xD.

Outer Diameter and Facing

- Straight outer diameter turning and facing.
- No limitation of part size. But rigidity of the workpieces and clamping are important.

Spare Parts

- Spare Parts for HFT-Shank

Spare Parts for Clamping System:

1. SCP2 → Clamp set
2. LH040 → Clamp Wrench
3. CSCFHFT → Shim
4. MIB1.6-3 → Screw
5. SDBSM → Screw Wrench
6. TRX10 → Torx Wrench

Spare Parts for VDI40-, PSC50- Toolholders

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Spare Part Set for Coolant Supply:

1. Screw
2. CBLHFTSP/CBRHFTSP → Coolant Block
3. Seal

Example: HFT DOXN L 2525M 1204
Example: PSC50 HFT ID 25105 DOXN L 1204

Phone: (800) 950-5202
www.sumicarbide.com