

# High-speed Machining

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**Ivan Sazhniev**

Department of Mechanical  
Engineering Technology and  
Metal-Cutting Machines

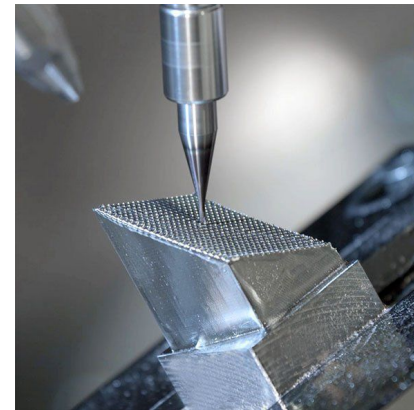
Department of Foreign  
Languages



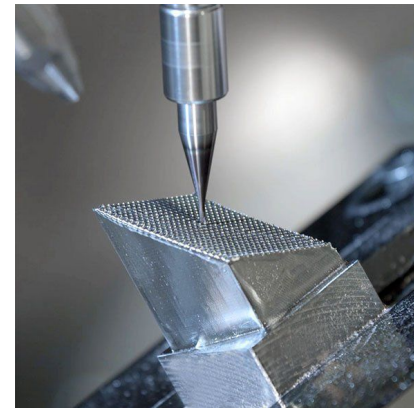
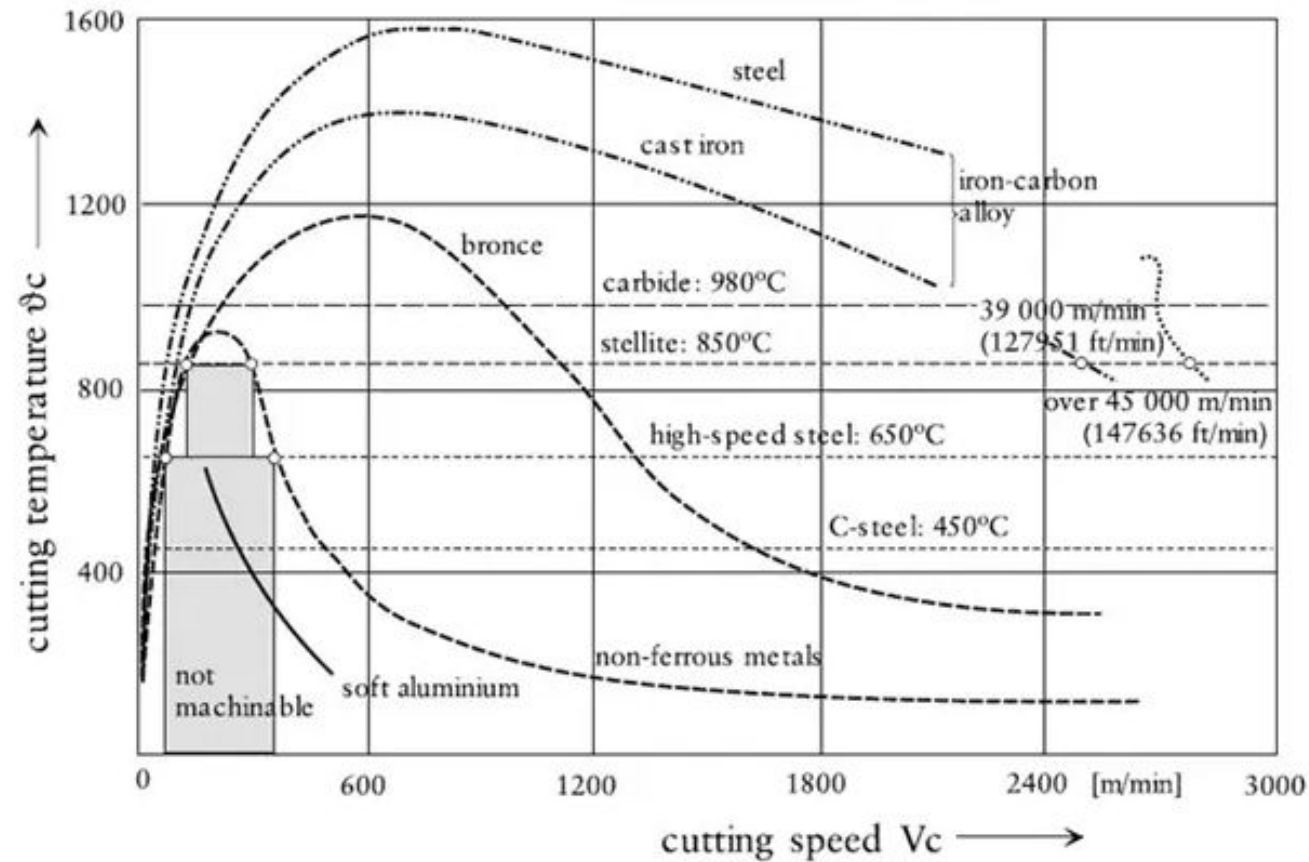
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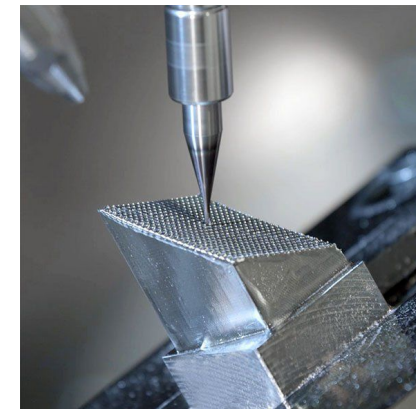
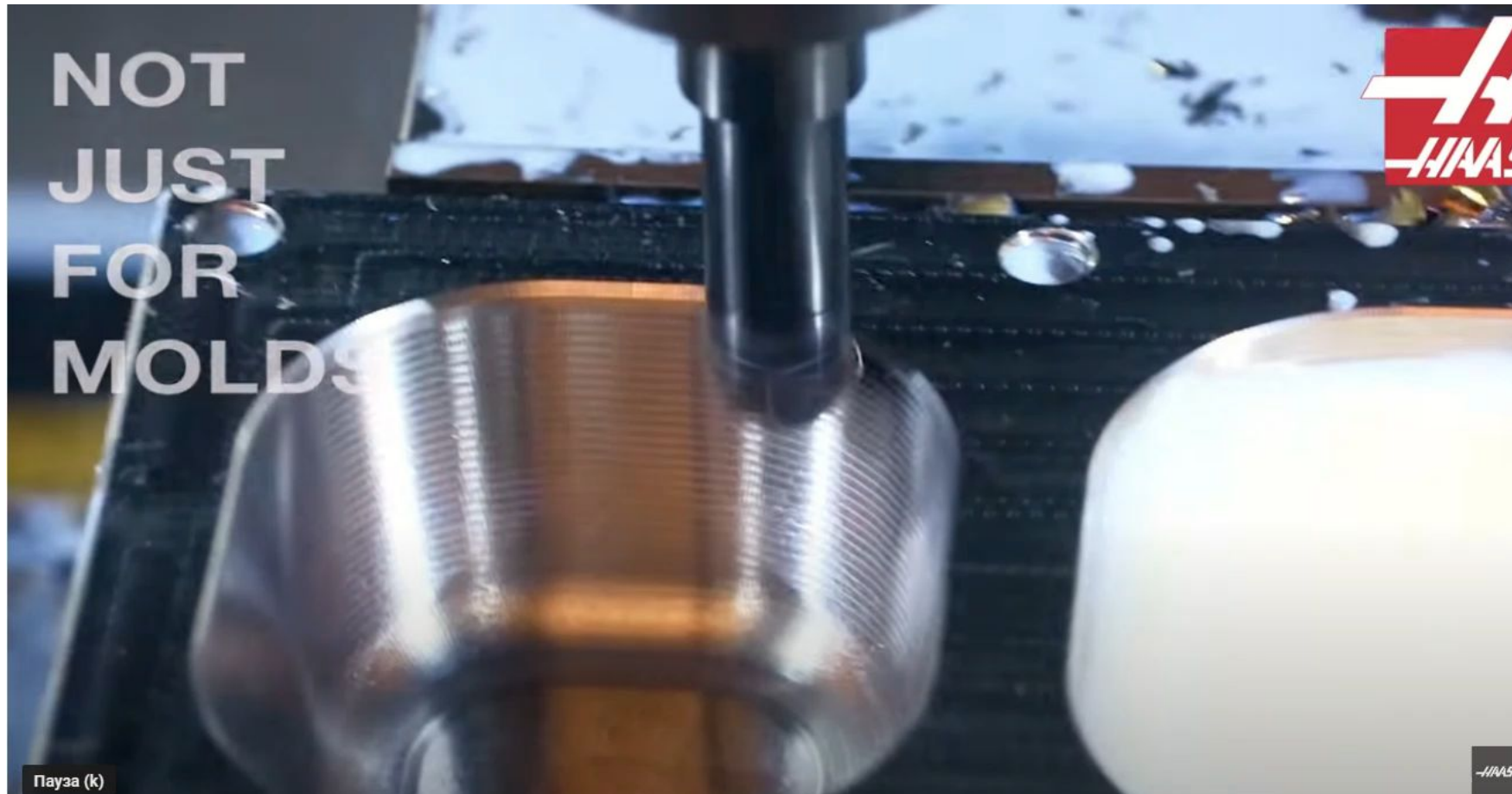
- **Machining temperature in milling at high cutting speeds**
- **High Speed Machining for Milling Machines**
- **Selecting a Cutter**
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# Machining temperature in milling at high cutting speeds



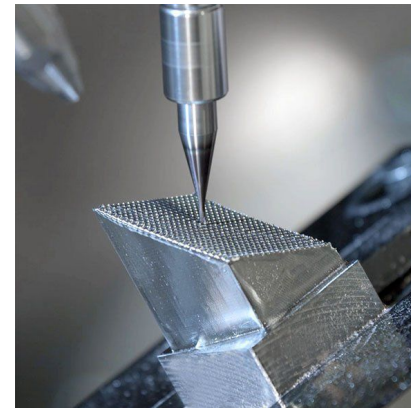
# High Speed Machining for Milling Machines



# Selecting a Cutter

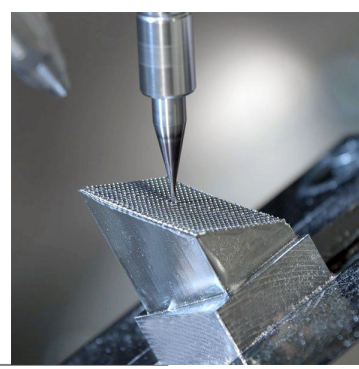
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Material	Operation	Machine Requirements
Titanium	Roughing, Low RPM	High Torque
Titanium	Finishing, High RPM	Low Torque
Aluminum	Roughing, High RPM	High and Low Torque, High HP Depends on $A_p$ and $A_e$
Aluminum	Finishing, High RPM	Low Torque, Low HP
Steel (300M)	Roughing, High RPM	High Torque, High HP
Steel (300M)	Finishing (after heat treat), High RPM	Low Torque, Low HP





# Conclusions



- High-speed machining, specifically milling, has the same variables as traditional milling. However, in a high-speed machining operation, slow, heavy cuts are replaced by fast, lighter cuts.
- Before starting any high-speed operation you need to examine the machine tool's power/torque graph to make sure that the machine will be able to handle the requirements that are needed
- Which tool to deploy, depends on a specific part.

# Thank you for your attention

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