



HIGHER TECHNICAL INSTITUTE

STUDY ON THE DESIGN  
PARAMETERS OF MACHINE TOOLS

By  
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Project Report  
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**HIGHER TECHNICAL INSTITUTE  
NICOSIA – CYPRUS  
MECHANICAL ENGINEERING DEPARTMENT**

**DIPLOMA PROJECT 2000/2001**

**Project Number: M/935**

**Title: “A study on the design parameters of machine tools”**

**Objectives:**

1. To study the design parameters of machine tools:
  - general purpose centre lathe
  - milling machine
  - shaping machine
  
2. Design parameters to be investigated and presented:
  - machine tool structure
  - selection of electric motor
  - power transmission
  - spindle gearbox
  - feed mechanism
  - screw cutting
  - kinematics and dynamics of moveable parts
  
3. Present drawings of the most important mechanism, indicating design parameters for dynamics and kinematics.
  
4. Construct a table with the most important specifications, one should have in mind in selecting a specific machine tool.

**Terms and Conditions:**

1. Engineering drawings should be presented according to ISO drawing standards.
  
2. Report should be according to HTI regulation, with respect to project report presentation.

**Student** : Stathi Nestoras (3ME2)

**Supervisor** : Dr Vassilios Messaritis

VM/AEP  
objectives2000-2001(98)



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## SUMMARY

TITLE: A STUDY ON THE DESIGN PARAMETERS OF MACHINE TOOLS

AUTHOR: NESTORAS STATHI

This project deals with a study of machine tools (lathe, milling machine and shaper) .The author due to this set up explains various movements, applications and uses of the machine tools.

The author took the design parameters, which should investigated and presented and he found information about them. Every design parameter is a new chapter, which cover at maximum the objective.