

Higher Technical Institute
MECHANICAL ENGINEERING DEPARTMENT
DIPLOMA PROJECT
DESIGN OF A WOOD LATHE

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M/821

JUNE 1998

**HIGHER TECHNICAL INSTITUTE
MECHANICAL ENGINEERING DEPARTMENT**

DIPLOMA PROJECT

**DESIGN OF A MACHINE TOOL
GEARBOX**

M/821

**By
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2907

AKNOWLEDGMENTS

I would like to express my gratitude to my project supervisor Mr. V. Messaritis for his valuable help and guidance in the preparation and completion of this project.

I also would like to express my sincere thanks to Mr. I. Ionas for his guidance in selection on gears.

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ABSTRACT

The purpose of this project is to design and study the parameters of a machine tool gearbox.

From the gearbox specifications which are given we can find the 12 spindles speeds, the machinery power, the power and the Torque.

From that data, as it can be seen in chapter I and 2, by using the Lewis & Herz method the dimensions of the gears can be calculated.

The next chapter deals with the design of the shafts.

Chapter 4 deals with the design of the keys which will be used in each shaft.

Chapter 5 and 6 deals with the selection and the design of the bearing and helps us to use the right bearings in each shaft.

The last chapter deals with the cost of the gearbox parts.