

FINAL YEAR PROJECT REPORT  
DIPLOMA IN MECHANICAL ENGINEERING  
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SHAH ALAM

"THE DESIGN AND MAKING OF A MICRO - CUT BORING UNIT"

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INTRODUCTION

This project concerns the design and making of a vertical boring tool normally to be fixed on a drilling machine, using the drilling machine as a source of driving power. It can also be fitted on the milling machine. This boring tool can be used for the final operation or a preliminary to grinding and other sizing operations. Another function is to give a relatively small scale diameter of the hole to be bored i.e. for the bearing housing.

This boring tool consist of three major parts namely

- (1) The cutting tool
- (2) The boring bar
- (3) The boring fixture.

and three minor parts namely

- (1) The cutting holder and adjuster
- (2) The clamp of workpiece and fixture
- (3) Bushings as guider.

Another function of this boring tool is to bore already drilled hole on a U-CHANNEL workpiece so as to enlarge it and to make the two holes axis symmetrical.