

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND FABRICATION OF  
ADJUSTABLE SPANNER**

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## **Abstract**

An adjustable spanner is a tool that used to tighten or loosen a bolt and nut. The idea to fabricate adjustable spanner come because of workers require spanners of different sizes to tightening or loosening nut and bolt. Besides, workers need a lot of tools to carry to workplace as there are no tools that can facilitate them. The objectives of this project are to design an innovation of existing adjustable spanner and to fabricate a spanner that can speed up the work of tightening and loosening. As a result of this project, the objectives were achieved, and the project went as planned but this innovation also has its own advantages and disadvantages. So new innovations must always be created in order to produce a quality and efficient adjustable spanner based on existing innovations.

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# CHAPTER ONE INTRODUCTION

## 1.1 Background of Study

A spanner is a tool that is used to provide mechanical torque to turn objects, such as nuts and bolts. There are variety of spanners that is used to do the operation of tightening and loosening of fastening devices such as adjustable spanner.[1]

The adjustable spanner has a long history (one hundred and twenty -five years). The adjustable spanner consists of three parts, a handle with part I, a worm tool and a sponge. Fixed sponges on almost all instruments have a ruler, which allows you to set the required value from the "mouth". Keep in mind that the length of the handle directly depends on the maximum size of the nut, with a lock that can “work”.[2]

Adjustable spanners come in a variety of shapes and sizes, ranging from taper locking spanners that required a hammer to set the moveable jaw to the size of the nut to the modern screw adjusted spanner. Some adjustable spanners adjust to the size of the nut automatically. Simpler models employ a serrated edge to lock the moveable jaw to the desired size, whereas more advanced ones employ sheets or feelers to set the size.[3]