

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF A DRINK CAN
COOLER (HAD01)**

HARIS AIMAN BIN DZULKIFLI

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ABSTRACT

This project is presenting the fabrication and proof of concept of drink can cooler (HAD01). Water is an important aspect to living beings. Everyday human drink on average 3 liters of water. Without proper hydration, it can lead to dehydration that can cause severe health problems. There are multiple types of water, for example soda, coffee, tea, and plain mineral water. Each of them is enjoyed differently according to a person's preference. Some enjoy their drinks cold, and others enjoy it hot. Objectives of this project is to cool down drink can with a faster time and more efficient compared to other method. This product is made from Aluminium Composite Panel (ACP), it uses water pump as the method for cooling drink. The result is an ice-cold drink from room temperature in just 3 minutes. In conclusion, the objective of this project is achieved as this product successfully cool down drink in faster time while being efficient.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Water is an essential part of the human body. Humans should drink about four to six cup of water everyday to stay healthy [1]. There are thousands of different types of water such as coffee, soda, and tea. Each of these different types of water tastes differently when they are at a different temperature. Most coffee and tea are best when they are hot whereas soda and other beverages are best when they are cold. Hot drinks are good when you are starting your day early in the morning but as the day goes on especially here in Malaysia it gets hotter and tiring. So, a cool drink will make you feel refreshed and energized during this time of the day.



Figure 1.1 Different sizes of drink can [2]

Water takes time to lower its temperature. Most of the time, we store our drink cans in a fridge for a long period of time and when we take it out it is cool to drink. The issue here is the time taken to cool down the drink can where it is ice cold or chilled, and the energy consumption of the fridge is very high. There is an alternative method to cool down the drink can faster than storing it overnight in the fridge and that is by putting ice in the drink. The problem with putting ice in the drink is it becomes diluted after a while because of the ice melting in the drink. Many people hate diluted drinks because it ruins the flavor of the drink.