

**PERFORMANCE, ANALYSIS AND SIMULATION OF A
TYPICAL FAN COIL UNIT (FCU) AT SCIENCE AND
TECHNOLOGY COMPLEX, UiTM SHAH ALAM**

**This thesis is represented in partial fulfillment for the award of the Bachelor of
Electrical Engineering (Hons)**

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ABSTRACT

Fan Coil Unit (FCU) is used to provide human thermal comfort by providing a comfortable environment within the space. This paper presents the performance and analysis of a FCU system at Science and Technology (S&T) Complex, UiTM Shah Alam. In this paper, FCU system has been identify for more understanding about the system. The data obtained are taken using HOBO data logger. The performance of FCU system has been evaluated due to the temperature and relative humidity of the sample location. Based on simulation done using Microsoft Visual Basic 6.0, the results were analyzed and discussed. Finally some conclusions and recommendations for future work are indicated.

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CHAPTER 1

1.0 INTRODUCTION

1.1 INTRODUCTION

The basic concepts of air conditioning are not understood by countless millions who enjoy the comfort produced by it. Yet, air conditioning is a readily accepted part of modern life [1]. Air conditioning is define as the simultaneous control of temperature, humidity, radiant energy, air motion, and air quality within the space for the purpose of satisfying the requirements of comfort or a process [2]. Air conditioning system are called air handling unit (AHU) for the larger system and fan coil unit (FCU) for the smaller system. The main function of air conditioning is to provide a comfortable thermal feeling for the occupants within the conditioned area regardless of what the outdoor conditions area. Thermal comfort is an important aspect in people everyday life. Without thermal comfort, many things would not be able to carry out. Malaysia is a hot and humid country, therefore homes, offices and commercial facilities would not be comfort without the air control of the indoor environment.

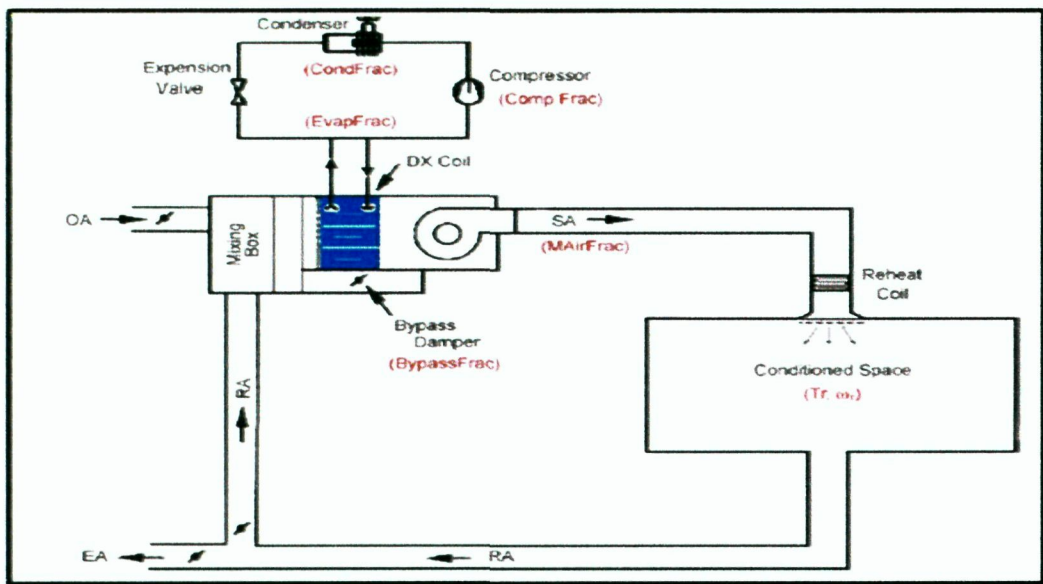


Figure 1.1: Schematic Diagram of Air-conditioning System [3]