

HIGHER TECHNICAL INSTITUTE
MECHANICAL ENGINEERING COURSE
DIPLOMA PROJECT

**DESIGN OF AN AIR - CONDITIONING
SYSTEM FOR AN OFFICE (COMMERCIAL) BUILDING**

M/859

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Contents:

Abstract

Acknowledgements

Chapter 1 - Introduction	page 1
Chapter 2 - Design parameters	page 5
2.1 Thermal comfort	page 5
2.2 Humidity	page 7
2.3 Sick building syndrome	page 9
2.4 Ventilation	page 11
2.5 Natural ventilation	page 16
2.6 Heat gains	page 16
Chapter 3 - A/C system selection	page 18
3.1 Fan-Coil A/C System	page 18
3.2 Variable Air Volume (VAV)	page 19
3.3 Variable Refrigerant Volume (VRV)	page 21
3.4 Under Floor Air Conditioning	page 23
3.5 Comparison and Final Selection of A/C System	page 27
Chapter 4 - Ventilation, Heating & Cooling Load Calculations	page 32
4.1 Heating Load Calculations	page 32
4.1.1 Exterior Wall	page 33
4.1.2 Double glazed window	page 34
4.1.3 Roof - Ceiling	page 35
4.1.4 Floor Slab	page 36
4.1.5 Infiltration	page 37
4.2 Cooling Load Calculations	page 38
4.2.1 Sensible Heat Gains	page 38
4.2.2 Latent Heat Gains	page 40
4.3 Ventilation Requirements	page 41

Chapter 5 - Hiross Flexible Space System	page 42
5.1 Conditioned Air Module (CAM)	page 42
5.2 Fan Terminal Unit (FTU)	page 44
5.3 Control Functions of the FTU	page 45
5.4 The Air Flow of the FTU	page 47
5.5 Hiromaic Control System	page 47
5.6 The advantages that F.S System Offers	page 49
5.7 Hiross F.S.S. Commissioning Report	page 50
Chapter 6 - Selection of the appropriate equipment	page 52
6.1 CAM Unit Selection	page 52
6.2 Fan Tile Unit Selection	page 53
6.3 Heat Pump Chiller Selection	page 53
6.4 Pump Sizing & Selection	page 54
6.5 Calculation of Chiller Control Stability	page 55
6.6 Piping - Ductwork Sizing	page 55
Chapter 7 - Night Cooling - Free Cooling	page 57
Chapter 8 – Cost Analysis	page 63
Appendices	
References	

Abstract

This project describes the design of an air conditioning system for an office (commercial) building. Prior to the final design, and based on the client's requirements, we will consider four air conditioning systems before concluding to the ultimate one to be used in that specific building. The parameters on which will focus our selection are a) Ergonomy b) Economy c) Reliability and d) Flexibility.

The final design of the air conditioning system will include all the necessary calculations for the ventilation, the heating and cooling requirements of the building and the selection (sizing) of the equipment to be employed. The selection of the appropriate machinery will be based on specific manufactures' catalogues.

Further more we will carry out a cost analysis of the selected system and will study the associated cost savings that the system may offer to the end client. An emphasis on the operational cost will be given in accordance with the maintenance costs.

Finally we will study the possibilities of utilising night and free cooling in an attempt to reduce the running costs of the building without, however, affecting the performance of the air conditioning system.

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