

DESIGN OF AN AIR CONDITIONING SYSTEM
FOR A MULTI-STOREY BUILDING

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PROJECT REPORT
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SUMMARY

The aim of this project is to Design an Air Conditioning System for a Multi-Storey Building. The building chosen is the "STELMEC" headquarters in Nicosia, Cyprus.

Architectural drawings for the building were provided. Design conditions were supplied, while ambient conditions were based on data collected from the Meteorological Service.

Energy conservation was considered as a major factor in the design of the System.

The thermal load of the building for heating and cooling as well as pipe and duct sizes were calculated using the "CARRIER" program.

The procedure followed to complete the project was the following:

- i. Architectural drawings were copied on tracing paper to be able to continue with the mechanical drawings.
- ii. Thermal loads were calculated using the "CARRIER LOAD CALCULATION PROGRAM".
- iii. The system to be employed was selected.
- iv. Pipe and duct sizes were calculated using "CARRIER PIPE/DUCT DESIGN PROGRAM".
- v. Selection of equipment and machinery.
- vi. Preparation of a preventive maintenance scheme for the major equipment.
- vii. Preparation of an estimated cost analysis for the system.
- viii. Preparation of detailed mechanical drawings (as Fitted drawings), including pipework and ductwork location as well as equipment location.

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