

**moya**  
air conditioning (pty) ltd



## Case Study – Museum Africa

**Project: Upgrade of Air conditioning at Museum Africa**

**Client: City of Johannesburg**

**Consultant: M&C Consulting Engineers**



# Introduction:

Moya Air Conditioning (Pty) Ltd, won the right via tender in January 2009, to upgrade the air conditioning in the West display and History store areas on the 3<sup>rd</sup> and 4<sup>th</sup> floor at Museum Africa in Newtown, Johannesburg.

Project entailed the installation of a chiller and chilled water system, complete with three custom built Air Handling Units and spiral ducting to the display areas.

The project was part of the upgrade of the Museum facilities, in anticipation of increased visitor numbers during the World Cup 2010.

A breakdown of the project elements follows:

# Project elements

## A breakdown of the key components



### Daikin Air Cooled Chiller

Installation of a 400Kw Chiller, complete with all necessary piping and steel structure to keep the chiller above street level.

Moya Air Conditioning (Pty) Ltd, handled the design of the structure, the erection of the structure including all necessary civils work, the rigging of the chiller in place and the certification of the structure by a registered structural engineer. All necessary OHS requirements were handled and met.



### Custom built AHU

Moya Air Conditioning (Pty) Ltd custom manufactured three chilled water Air Handling Units, to supply cooling and humidity control to the areas.

It is critical that the Relative Humidity remains constant at 40%, to maintain the integrity of the artifacts on display and in storage.

Use was made of a three way modulating valves and automatic package humidifiers to maintain temperature and humidity to the areas.

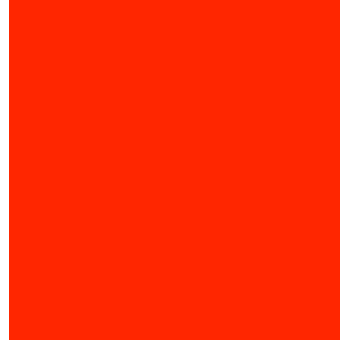


### Painted Spiral ducting

In order to accentuate the aesthetics of the display area spiral galvanized ducting painted white was used. We installed more than 270m<sup>2</sup> of spiral ducting into the display area

### Other components

Also supplied, were new distribution boards, electrics and cabling to run the chiller and AHU's. Each AHU, is run independently through its own Motor Control Board, with future BMS integration.



# Conclusion

## Successful project completed

This project was successfully completed on time and to the complete satisfaction of the client and consulting engineers.

This project showed the versatility, diverse knowledge and capability of Moya Air Conditioning (Pty) Ltd and it's staff.

The installation continues to operate and maintain the critical conditions in the store area and pleasant conditions for visitors in the display area.

Project contacts:

Client: City of Johannesburg – Sue Robertson – [SueR@joburg.org.za](mailto:SueR@joburg.org.za) - 011375 - 6071

Consulting Engineers: M&C Consulting Engineers – Val Fiorotto – [mandc@global.co.za](mailto:mandc@global.co.za) - 0114409953

**moya**  
air conditioning (pty) ltd