



## Abu Dhabi Islamic Bank HQ, Abu Dhabi

### Bank Head Quarters' cool upgrade for its customers

In 2012, following its corporate rebrand, the Abu Dhabi Islamic Bank began a high-spec upgrade of their head office buildings, to include underfloor cooling throughout the ground floor atrium and coffee shop and mezzanine level coffee shop.

This iconic bank, which was formally inaugurated by His Highness Sheikh Abdullah Bin Zayed Al Nahyan, UAE Minister of Information and Culture, when it opened in 1998 has won numerous awards within the middle eastern banking industry, and has branches across the middle east plus the UK.

### Thermo-Floor UK's Involvement

Thermo-Floor carried out a bespoke design of the underfloor cooling for the atrium and mezzanine areas, specific to the consultant requirements. This design covered an area of approx 1000m<sup>2</sup> of underfloor cooling.

After ensuring timely delivery of materials from the UK to Abu Dhabi, Thermo-Floor were then responsible for the Project Management of the first zone of underfloor cooling on the ground floor.

#### Facts and Figures

##### Building

- Floor area : 1000 m<sup>2</sup>
- Insulation:  $R_c = 0.032 \text{ m}^2 \cdot \text{K/W}$
- Floor insulation: 1000 m<sup>2</sup>

##### Source of energy

- On-site chiller

##### Climate system

- Cooling
- Active cooling down to 17°C flow

##### WTH-system

- Full service project execution
- 4x RU-WK manifolds for cooling
- Central control for each zone
- 4.5 miles of underfloor cooling pipe
- Integral heat exchangers individually sized to achieve the required cooling loads

For this our project manager travelled out and met with the construction team, to run through all design drawings and lead a training session with the installation team, and then supervised the installation to the first zone and completed a water test on the system.

For this project we chose our exclusive RU-WK manifolds specific for underfloor cooling which has its own heat exchanger.

A total of 4 manifolds were used on the ground floor and 1 manifold on the first floor, and approx 7500m of pipe installed to provide cooling to the areas (nearly 4.5miles of pipe)

The final result is a bespoke system that links to the buildings state of the art control systems, providing constant and comfortable temperature levels throughout the ground floor, via underfloor cooling, to counter the high temperatures that Abu Dhabi experiences all year round, and to alleviate the cold air drafts from the air handling units.