

Toshiba Solutions

River Island flagship air conditioned by latest Inverter system

Equipment:

Toshiba Digital Inverter
Split Systems

Installer:

Metainy Building
Services Group



Application

How could adequate air conditioning be provided for the prestigious refurbishment of the UK flagship store of retail group River Island in London's Oxford Street, on three storeys, from the 200Amp power supply that was the maximum available for the air conditioning and ventilation services?



Solution

Metainy Building Services Group, a well-established Toshiba Accredited Installer (TAI), with a 25 year working relationship with River Island, specified, designed and installed the store's new air conditioning system. It has proved so effective that it even coped with the record peak occupancy levels, of several hundred bodies for several hours, experienced at the store's glittering gala celebrity opening.

Metainy utilised all the advantages of inverter-based air conditioning systems, which include substantial energy savings over non-inverter systems. This increased efficiency enabled them to produce a completely different overall system design based on just single-phase power, which overcame the major site constraint.

The cassette-based installation provides 195 kW of cooling from sixteen Toshiba Digital Inverter heat pump split systems using R410A refrigerant. The Toshiba inverter based system with its optimised start-up loads and excellent low-load efficiency limits the amount of electricity required and operates at impressively low sound levels.

The siting of outdoor and indoor units was particularly problematic due to restricted roof space and, internally, small voids, a complex lighting layout, multiple pillars and the positioning of functions within the shop such as fitting rooms and stock areas. The compact size of the Toshiba units enabled many of these difficulties to be overcome.

Additional air conditioning to the shop's feature entrance hall atrium is provided by a 55 kW air handling unit ducted to a number of swirl diffusers within the double height ceiling. A Toshiba wall-mounted multi-split system was also installed to serve the three internal offices.

For the ventilation systems Metainy used a heat recovery system with a small amount of supplementary heating from electrical heater batteries. This had the advantage of maintaining a minimum energy requirement while completely satisfying the client's heating and cooling needs.



The new Toshiba Digital Inverter Split System has solved some tricky problems.



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