

# IBM Server Room, Petone, Wellington

## Scope of Work

A specialised raised floor process cooling system was required to be installed at the Process Control Centre at IBM's Petone facilities.

The server room is used for operating and testing up to 160 powerful computers at any point in time. An adjoining UPS Room also had cooling requirement.



## Engineering Features

The installed system consists of two water cooled Process Coolers at 60kw capacity each for the server room and one 30kw unit for the UPS Room. The units are suited for raised floor application and the air is distributed through floor diffusers arranged in a hot and cold aisle configuration. The system is also configured for future expansion – up to double the current capacity.

- Two dry coolers each with Heat of Rejection of 300kw are installed outside the building. The condenser fans are variable speed controlled based on the varying cooling loads.
- Two fresh air handling units [duty and stand by] fitted with pre-cooling Dx coil are used to positively pressurise the server room
- The Process Coolers come with water-side economiser coils and are connected to the condensing water circuit to provide free cooling when possible, particularly in low ambient condition.
- A full direct digital open protocol web based building management system offers full control of the system including energy monitoring, lead-lag control and alarm generation.

## Project Highlights

- Total Cooling 150kw [expandable to 300kw]
- Total Dry Cooler Capacity 300kw
- Total Ventilation Air flow 2,020l/sec