Mitsubishi Electric water-cooled City Multi VRF delivers flexible supplementary cooling for the Chevron HQ fit-out within a high-performance chilled-water base-building system.

Project Info

Application

Chevron HQ,
One The Esplanade

Location

Elizabeth Quay, Perth

The Team

HVAC Contractor

Envar Engineers & Contractors

HVAC Consultant

Design & Construct by Contractor

About the project

Chevron Australia's national headquarters is located within One The Esplanade, a 29-storey premium commercial tower positioned at Elizabeth Quay in Perth. The development delivers over 52,000 m^2 of A-Grade office space, consolidating Chevron's workforce within a purpose-built environment designed to support collaboration, flexibility and long-term operational performance.

The project incorporates high-quality workplace amenities including conferencing facilities, breakout areas and end-of-trip facilities, all within a prominent riverfront setting. A strong focus was placed on sustainability and building performance, targeting leading Green Star outcomes and delivering a modern, efficient workplace aligned with Chevron's long-term investment in Western Australia.

The challenge

The Chevron HQ fit-out required a mechanical solution that could operate effectively alongside a high-performance base-building system, in which primary cooling demand was already met by central water-cooled magnetic-bearing chillers.

Within this environment, the challenge was not base-load cooling but providing responsive, localised conditioning for meeting rooms, breakout spaces, and high-occupancy zones across multiple levels. These areas experience highly variable loads and require fast response times without impacting central plant operation.

In addition, plant space within tenant floors was constrained. Any supplementary system needed to be compact, quiet in operation, and capable of being installed within small service cupboards without dedicated ventilation, a key limitation in premium commercial office fit-outs.

PQHY system installed within unventilated service cupboards, as it does not require ventilation.

The solution

Working in conjunction with the mechanical contractor, Mitsubishi Electric supplied a water-cooled City Multi heat pump (PQHY) VRF system to deliver supplementary cooling across Levels 13–28 and additional lower-level fit-out areas.

The VRF system was integrated with the base building condenser water loop, allowing it to operate independently of the central chilled water system while still leveraging the building's hydronic infrastructure. This approach enabled targeted conditioning of critical zones such as meeting rooms and breakout spaces, complementing the base building system rather than competing with it.

The PQHY system can be installed within unventilated service cupboards, as it is self cooling and does not require ventilation to remove rejected heat. This removed the need for dedicated plantrooms and enabled services to be integrated within tight floor-plate constraints, a key advantage for the Chevron HQ fit-out.

Throughout the project, a wide range of ducted indoor units were deployed to suit varying load profiles and space requirements, connected via distributed branch-pipe networks to maximise system flexibility and zoning control.

The mechanical contractor worked closely with Brookfield and Multiplex to deliver a grade one building offering leading workforce amenities and energy-saving measures. A 6 Star Green Star rating from the Green Building Council of Australia has been awarded.

Scan
For more product information.

Unit Information

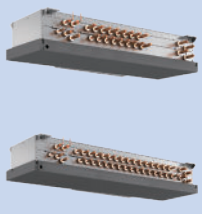
Outdoor Units

PQHY-P YLM-A1 x 47
PQRY-P YLM-A1 x 2
PUHY-P YNW-A x 1
PUMY-P YKMD-AR1 x 1
PUMY-SP VKMD-AR1 x1
PUZ-ZM YKA-A.TH x 1

Indoor Units

PCFY-P VKM-ER1 x 14
PEFY-P VMA x 138
PEFY-P VMHS-E/ER1 x 22
PKFY-P VKM-ER1 x 2
PKFY-P VLM-E x 5
PLFY-P VFM-E1.TH x 1

PLFY-P VEM-A.TH x 5
PEA-M125GAA x 1



Branch Controllers

CMB-M108V-JA1 x 1
CMB-M108V-J1 x 1

Controllers

AE-200E x 6
EW-50E x 36
PAR-40MAA x 84
MAC-334IF-E x 132