

## Case Study



# KINGSGROVE BUNNINGS

## PROJECT DESCRIPTION

Located in Sydney's inner south-west, Bunnings Kingsgrove is a large-format, two-level retail development spanning over 16,000 square metres. Designed to handle high foot traffic and extensive warehousing needs, the site required a reliable HVAC system capable of year-round performance—especially during Sydney's record-breaking summer, reaching temperatures as high as 47°C.

To meet these demands, Mitsubishi Heavy Industries Air-Conditioners Australia (MHIAA) partnered with mechanical contractor PTAC to supply and install 6 KXZE1 Series VRF systems. With the building located at the intersection of two major roads, conventional crane access was not possible. Instead, all units were airlifted into position via helicopter—a carefully planned operation that highlighted MHIAA's expertise in managing complex commercial installations.

## PROJECT REQUIREMENTS & CHALLENGES

The project posed significant logistical challenges due to the limited rooftop access and high-traffic location. Traditional crane installation was not feasible, requiring the use of a helicopter to complete the lift in a single, well-coordinated window. This demanded precise scheduling and on-time delivery of all equipment to avoid delays.

Functionally, the HVAC system needed to provide powerful, consistent climate control across a vast retail space, performing reliably even under extreme outdoor temperatures. Bunnings also required the system to be centrally managed, ensuring consistent comfort throughout the store. Future flexibility, including zoning or sub-metering options for tenancy or billing purposes, was also a consideration in system selection and design.

### PROJECT DETAILS

Bunnings Warehouse, Kingsgrove, NSW

### COMPLETION DATE

April 2017

### CONTRACTOR

PTAC

### INDOOR UNITS INSTALLED

5 x FDU224KXE6F

1 x FDU280KXE6F

3 x FDU280KXZE1

1 x FDT112KXE6F

7 x FDU224KXE6F

### OUTDOOR UNITS INSTALLED

3 x FDC450KXZE1

3 x FDC400KXZE1

### MHIAA REPRESENTATIVE

Anthony McQuilkin



## MHIAA'S SOLUTION

MHIAA supplied 6 KXZE1 Series VRF condensers, including a mix of FDC450KXZE1 and FDC400KXZE1 models, installed in a modular configuration. These units were selected for their high-performance output, robust construction, and long piping runs—making them ideally suited for rooftop installation across large commercial buildings. Each KX unit can operate independently or in sync with others, offering flexible zoning and energy-efficient operation. For this project, the systems were configured to operate from a central controller, streamlining climate control for the large internal footprint.

To navigate the complex delivery and installation process, MHIAA worked in close collaboration with PTAC to manage all logistics, from product scheduling through to the helicopter lift. The airlift eliminated the need for road closures, avoided extended crane setup times, and reduced impact on the surrounding area. All rooftop components, including the KX units and associated platforms, were installed in a single morning with minimal disruption to the site and community.

The performance of the system has since been proven in real-world conditions. Throughout one of Sydney's hottest summers on record, with daytime temperatures exceeding 45°C, the installed units continued to operate efficiently and effectively, delivering reliable cooling across the large retail environment. In addition to maintaining comfortable conditions for staff and customers, the system has also delivered consistent heating performance during cooler months, solidifying its place as a year-round solution for the site.

The successful delivery of this project highlights MHIAA's capability to support large-scale commercial developments with precision logistics, dependable technology, and expert coordination at every stage of ducted units were installed into other service areas.



# THE EXPERTS IN AIR

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