

BOTANICAL APARTMENTS

SUBIACO, WESTERN AUSTRALIA

CASE STUDY

PROJECT DESCRIPTION

Located in Subiaco, one of Perth's most sought after inner city addresses and home to many of the Perth's best bars, cafés, restaurants and live entertainment venues - Botanical is a building that redefines apartment living by combining it with nature at every opportunity.

Designed by renowned Hiram Architects' and developed by Jaxon Construction, the development employs various passive and active strategies to achieve a benchmark 4-star Green Rating and an average 7-star NatHERS rating.

The building itself comprises of 74 luxurious apartments spread over 6 levels, a restaurant on the ground floor, 2 basement levels and communal areas on the roof as well as unrivalled apartment amenities such as a stunning rooftop with breathtaking parkland and city views, a 25-metre heated infinity pool, 5-star private dining room and entertainment facilities, a spa, sauna, steam room, yoga retreat areas and last but not least - an outdoor rooftop cinema.

To achieve the 4-star Green rating, there was a strong focus on sustainable initiatives. This included energy efficient glazing, solar panning and natural light with the Botanical's stunning five-storey atrium bathing the building interior in light. The louvred roof allows air to circulate through the building interior, creating an internal sense of light, space and calm. On every floor, each apartment is connected with a sky bridge that includes reticulated planter boxes and cascading plants.

In addition to its aesthetic merit, the buildings 'green' façade will also provide both privacy and shelter from the elements, absorb and process pollutants, attenuate sound as well have a profound impact on the resident's physical and mental wellness.

PROJECT DETAILS

Botanical Apartments
Subiaco, Perth, WA

COMPLETION DATE

February 2019

INDOOR UNITS INSTALLED

36 x FDUT**KX Ducted Systems
77 x FDUM**KX Ducted Systems
59 x FDU**KX Ducted Systems

OUTDOOR UNITS INSTALLED

76 x FDC***KXEN6 VRF Systems
1 x FDC475KXZE1 VRF Systems
3 x FDC100VNP Ducted Systems

COMBINED SYSTEM CAPACITY

875kW

BUILDER

Jaxon Constructions

CONTRACTOR

Ocean Air Services

MHIAA REPRESENTATIVE

Aaron Boothey - 0420 304 695

SUPERIOR TECHNOLOGY THAT
OUTLASTS AND OUTPERFORMS

 **MITSUBISHI
HEAVY INDUSTRIES**

AIR CONDITIONING



PROJECT REQUIREMENTS & CHALLENGES

With all 76 of the modern apartments, these being a mix of 2, 3 and 4 bedrooms, as well as the building's communal areas such as the gym, restaurant and other common areas requiring a reliable heating and cooling solution, the project required a total of approx. 875kW of air conditioning.

In order to abide by the buildings high energy efficiency requirements, it was vital to carefully consider the buildings open plan design during every stage of the project. This modern design featured multiple light filled areas and a large amount of glass - dramatically increasing the heat load of the building during Perth's sunny afternoons and greatly increasing the overall air-circulation of the building.

To account for the large amount of expected heat load from the glass and offer sufficient airflow while remaining energy efficient, the proposed system would need to be integrated with a range of DX solutions.

To reflect the pristine and luxury design of the building and deliver the best level of comfort for all occupants, the solution would need to be invisible to home owners while also being extremely quiet during operation. Due to the small amount of space in between levels, this would proposed a design challenge for indoor unit selection.

With two plant rooms, one located in the basement and one of the roof - both being quite small in size, it was important that all condensing units were compact and allowed for flexibility to ensure installation, commission and ongoing maintenance would as easy as possible.



SUPERIOR TECHNOLOGY THAT
OUTLASTS AND OUTPERFORMS

 **MITSUBISHI
HEAVY INDUSTRIES**

AIR CONDITIONING



MHIAA SOLUTION

After careful consideration of all aspects and requirements of the project and working closely with experienced contractors Ocean Air Services, a mixture of ducted indoor units combined with our highly efficient KX Micro VRF systems and ducted outdoor units were ultimately chosen for the project.

A range of FDUT, FDU and FDUM ducted systems were chosen to service all apartments and indoor communal areas. Due to their compact size (with the FDUT series measuring only 200mm while the FDUM series measured 280mm), the slim-profile high & mid static ducted fan coils with condensate pumps offered a discreet solution and would allow easy installation into the confined bulkheads and ceiling spaces while still maintaining performance.

For outdoor units, a mixture of our KX VRF systems and our ducted condensers were selected. The KX Micro systems - our powerful yet compact VRF solution, were connected in a multi-format which offered a high-performance, flexible and energy efficient solution for individual apartments and small areas within the building. This ensured adequate airflow and individual control over each apartment while it's space-saving design allowed all the outdoor units to fit within the tight confines of the rooftop plant room - maintaining building aesthetics.

To service the large gym and communal areas on the rooftop, our high efficiency KXZ VRF system was selected. Given the size and frequency of use of this area it was vital that the system for this area was powerful enough to effectively cool and heat this space while remaining efficient and keeping running costs down.

By working closely with Ocean Air Services, MHIAA was able to deliver a luxury, high-end and reliable solution for this entire, complex including all apartments, communal spaces and commercial spaces on the ground floor.



SUPERIOR TECHNOLOGY THAT
OUTLASTS AND OUTPERFORMS

 **MITSUBISHI
HEAVY INDUSTRIES**

AIR CONDITIONING