



LOTUS TOWER

BACKGROUND

Applied Air Services, an air conditioning specialist based in the Brisbane suburb of Geebung, commenced work on Lotus Tower in March 2019. A luxury villas apartment and penthouse development, Lotus Tower is located in the highly sought-after suburb of Kangaroo Point.

The complex features an extensive range of residential amenities including a rooftop sun deck and spa, swimming pool, dedicated yoga space, a golf simulator and children's play areas, as well as high-end residential villa-style apartments, penthouses and townhouses.

THE PROJECT

The 24 storey Lotus Tower complex consists of four levels of basement and 19 levels of apartments, with level 20 the penthouse floor. There are an additional 12 townhouses detached from the main tower. Common areas within the precinct include a gym, golf simulator, reception and private dining area.

Applied Air Services was required to meet the individual heating, cooling and air flow requirements of all residential and commercial tenancy, as well as the building's shared amenities.

OVERVIEW

APPLICATION
MULTI-TENANCY
COMMERCIAL BUILDING

.....
SITE
LOTUS TOWER

.....
INSTALLER / CONTRACTOR
APPLIED AIR SERVICES (QLD)

.....
COMPLETION DATE
DECEMBER 2019

LOTUS TOWER





CHALLENGES

Managing power allocation for each tenancy was a requirement of the chosen HVAC system. The Fujitsu General VRF solution enabled this to be implemented due to its power apportioning feature. All the Lotus Tower indoor units are powered from a local distribution point from the apartment, and the building has watt hour meters, monitoring the power used for all the outdoor units. Software converts power meter usage into a percentage for each tenant.

OUTCOME

The Lotus Tower project required the installation of 54 outdoor units and 533 indoor units. During installation not one of them had a fault, error or gas leak which is a testament to the quality of the product and the installation quality.

With power apportioning managing the systems energy usage, the building management can extract reports regarding the allocation of energy usage to understand where there is wastage, and where savings can be made.

A Fujitsu General ducted air conditioning system was installed in each townhouse, providing zone control and individual system management.

A Fujitsu General VRF heat recovery system was installed in the main tower. Applied Air used bulkhead fan coil units connected to multiple RB units located in the corridor. The bulkhead fan coil units were chosen for the compact size and internal drain pumps.

The basement received CO (carbon monoxide) controlled ventilation which allows system sensors to level the CO produced by vehicles in the basement and operates ventilation fans to reduce the amount of CO, a new standard practice in the industry.

"Fujitsu was the preferred choice over competitors with its five-year warranty as standard. I also have peace of mind with securing manufacturer parts and labour warranty." Jeff Mann, Applied Air Services.

PRODUCT OVERVIEW

PRODUCTS:

VRF HEAT RECOVERY
VRF HEAT PUMP
DUCTED SYSTEMS
WALL HUNG SPLIT SYSTEMS



QTY OF INDOOR UNITS:

519 X VRF
12 X DUCTED UNITS (LHTDP)
2 X WALL HUNG SPLIT SYSTEMS

QTY OF OUTDOOR UNITS:

35 X VR-II
4 X J-IIS
1 X J-IIIL



CENTRAL CONTROLLER:

SYSTEM CONTROLLER
(UTY-APGXZ1) WITH POWER
APPORTIONMENT (UTY-PEGXZ1)



SEPARATION TUBES:

44 X 4 PORT RB UNITS
23 X SINGLE PORT RB UNITS
391 X SEPARATION TUBES



TOTAL SYSTEM CAPACITY:

1271.9KW OF CONDENSER
COOLING CAPACITY