

The Jungle, Warrington, UK



Air conditioning solution tames a 'steamy' Jungle – all year round

Jungles conjure images of hot, steamy places — but there's one in Warrington that maintains a comfortable 21°C all year with an air conditioning solution from Daikin UK.

This Jungle is a popular children's indoor soft play facility that owners Paul and Sarah Lott recently relocated to larger premises. Paul Lott says after 11 years the business had outgrown its previous 5,700 sq.ft industrial location. It was also often too hot in summer and too cold in winter.

The new premises in a retail park near the centre of Warrington gives The Jungle 11,000 sq.ft over two levels. Brightly coloured playing areas are now much larger and there's more opportunity for parents' and children's refreshment in the spacious new café facilities. As a result, the owners soon noted good turnover growth.

A key contributor to the enhanced experience at The Jungle is the Daikin air conditioning system, installed by local Daikin D1 Partner, Profreeze.

The solution was chosen because Daikin could provide a product specifically selected and designed for the application – with design input and advice for Profreeze where necessary.

The installation consists of a Daikin D-AHU Modular R air handling unit, with a pair of Daikin ERQ-AW1 heat pump condensers to provide the necessary cooling and heating capacity to DX coils inside the AHU.

The size 7 AHU delivers a supply and extract air volume of 7,776 m³/h. Its rotary wheel heat recovery device exchanges heat between exhaust and fresh streams – tempering the incoming fresh air to ensure the most efficient use of the two air cooled condensing units.

Each 10hp condensing unit has a nominal cooling capacity of 28kW and heating capacity of 31.5kW.

Profreeze director Lee Coates says air is ducted to outlet grilles on both levels of the building, with a return flow via extraction points on the ground floor. He says: "The ductwork is exposed, so it was designed to look good as well as delivering air to all parts of the building.

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Project Requirements

- ☒ Air Conditioning
- ☐ Air Curtain
- ☐ Air Purification
- ☒ Heating
- ☒ Heat Recovery
- ☐ Hot Water
- ☐ Refrigeration
- ☒ Ventilation

Year of installation
2016

Installed Systems

- > Air handling unit
- > Heat pump condensing unit

The AHU and condensing units are in a service area at the rear of the building, and enclosed by a wooden fence for neatness and security.

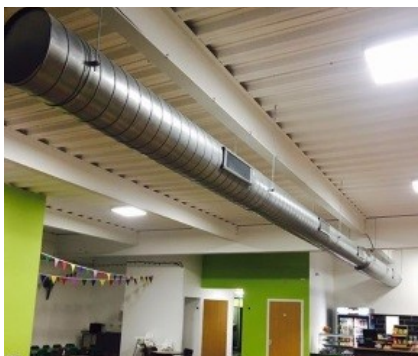
The control system enables separate programmed operations during the week and at weekends. During operational periods, the air handling unit controller ensures the airflow, heat recovery and temperature settings are maintained.

Daikin ERQ-type condensing units are designed for pairing with Daikin modular AHUs. The R410a based, inverter-controlled heat pumps offer high efficiency and fast response to changing loads.

There are 10 standard sizes of Daikin Modular AHUs, capable of supplying air volumes of 500m³/h to 25,000m³/h.

Further development of the range has seen the introduction of the Modular P, incorporating a plate heat exchanger as the heat recovery device and the new Modular L, the perfect solution for decentralised ventilation.

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The ductwork within the building has been left exposed as part of design.



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