

# CASE STUDY



## Cooling The Dolphins



**Site:** Sea World Nara Resort

**Location:** Gold Coast, QLD

**Equipment:** Portachil HSC-3500  
Americ VAF-3000

A component failure within the 20 kW packaged air conditioning unit serving a restaurant within the Sea World Nara Resort complex, required the A/C unit to be taken offline in order to undergo repairs. The Brisbane branch of Applied Climate Control were engaged to provide temporary cooling for the area for a two week period while spare parts for the 20 kW A/C unit were being sourced.

Normally, portable A/C units setup and strategically positioned within the area to be cooled would be the standard solution. However, staff working in the area were concerned that noise produced by the portable A/C units would be an issue. In addition to this, due to the limited space available within the plant room, a small packaged A/C unit could not be utilised either. After consultation with representatives of Sea World Nara Resort and Acclaim Air the site mechanical contractor, it was agreed that three Portachil HSC-3500 units would be installed within the plant room area supplying the existing A/C duct system with the cool air required.

Special plenums were designed, manufactured and fitted to the supply and return air of the **PORTACHIL HSC-3500** units. Additionally, Acclaim Air cut into the supply and return air systems within the existing ductwork and fitted complementing plenums to facilitate the union of the existing and temporary systems. To ensure correct, balanced air flows were achieved within the setup, two **VAF-3000** (vane axial fans) were utilised. One **VAF-3000** to funnel the supply air from the three cooling units into the existing supply air duct, while the other to direct the air from the existing return air duct system back to the portable units.

The **PORTACHIL HSC-3500** units are designed to duct away the condenser heat generated, via a false ceiling cavity, open window, vent or doorway. In this instance, wall vents were utilised to allow the hot air to be expelled to atmosphere.



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