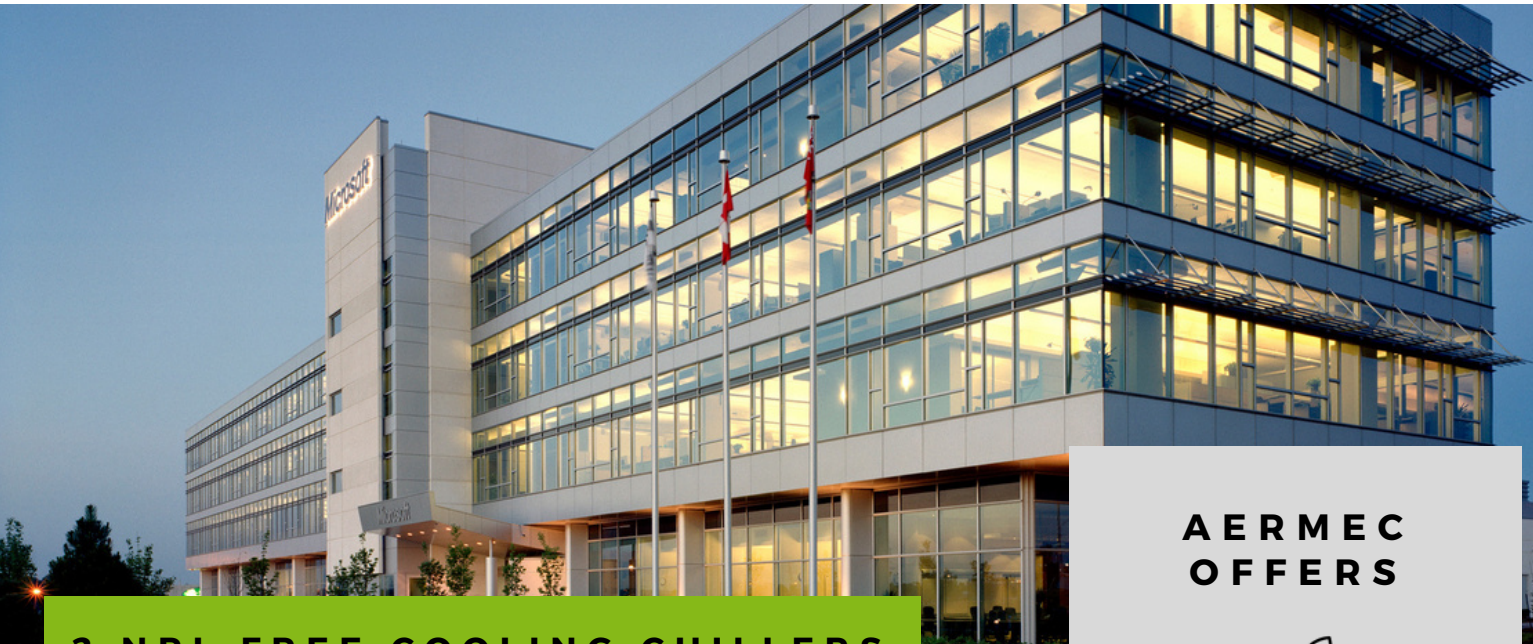


# MICROSOFT CANADA HEAD OFFICE

MISSISSAUGA | ON




## 2 NRL FREE COOLING CHILLERS

Established in 1985, Microsoft Canada Co. is the Canadian subsidiary of Microsoft. The Mississauga Headquarters oversees 10 of Microsoft's regional offices across the country. In order to support such extensive operations it is imperative for the data and server rooms remain cool.


The engineers chose two NRL0600 free cooling chillers for a total of 68 tons, with internal buffer tanks, and dual pumps. The benefit of the Aermec free cooling chillers is that they are able to have cooling all year round with maximum efficiency. These chillers will go into hybrid free cooling mode when the ambient temperature is 4°F less than the units inlet water temperature. In hybrid mode, the Aermec unit floods the coils on the outside of the unit and then kicks the fan speeds up to high speed. When this happens the unit will begin to use outside ambient air providing free cooling and the units start to shut down compressors. By shutting off compressors Microsoft is saving as much energy possible. As the ambient conditions continue to drop, compressors will continue to shut off until no compressors are in use. When the outdoor ambient is approximately 18°F below the return water temperature the conditions for 100% free cooling into the building are met.

The energy savings with in the data center are approximately 30% annually and as an added bonus the compressors run much less often and never at low temperatures which dramatically extends the life expectancy.


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SOLUTIONS



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INNOVATIVE  
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