

ColdLogik

CASE STUDY



STIHL HQ, Virginia Beach

New Build Data Centre

2012

USystems
A brand of  legrand®

STIHL®

The Client

Virginia Beach-based STIHL Inc., one of several manufacturing facilities in the STIHL Group, is the headquarters for U.S. operations. STIHL Inc. employs over 2,100 people nationwide, with more than 1,900 in Virginia Beach, Va., in a variety of positions from manufacturing, product assembly, manufacturing engineering, sales and marketing, and finance.



The Virginia Beach facility is located on approximately 150 acres with over two million square feet under one roof, where the company produces a full line of high quality, handheld outdoor power equipment including blowers, trimmers, brush cutters, and multi-task tools, as well as the number one selling brand of chainsaws worldwide.

STIHL strives to be their customers' most valued and trusted business partner by offering exceptional service and support...building on the STIHL tradition of excellence.

STIHL Inc. manufactures over 260 model variations of handheld outdoor power equipment for sale in the U.S. and around the world. STIHL products are sold through a network of over 8,000 servicing power equipment retailers from coast to coast — not mass merchants.

The Brief

In 2012 STIHL were having a new 200kW data centre designed for their Virginia Beach Headquarters. Following extensive consultation, it was decided that a water-cooled system was to be their preferred option.

The design specification had to meet tough criteria, including low energy consumption from a renewable source in line with their environmental policy, N+1 redundancy and due to their geographical location for the building and cooling solution to withstand a hurricane without any downtime to their operations.



Leak Prevention System (LPS) and Cooling Distribution Unit (CDU) installed in a rack ensures water tight security and a constant water temperature.



CGI of interface frame to couple the CL20 rear cooler to existing cabinets within the data centre.



The Cooling Solution

The ColdLogik team designed the most energy efficient solution for STIHL and thanks to their access to a natural underground water supply, water was taken via a bore hole from the underground springs with a nearby lake used as a backup resource this solution was naturally hurricane proof as no water towers or external plant would be required.

STIHL wanted the greenest and most effective cooling solution on the market, ColdLogik was their natural choice.

Because the cooling source was below ground the water supply temperature was a constant 64.4°F allowing for all year-round free cooling therefore benefiting hugely on cost savings as it took less than 7.5kW to cool 200kW IT heat load.

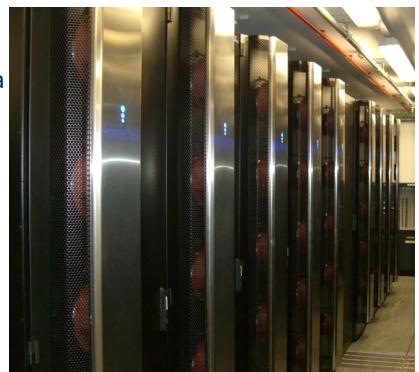
All year-round free cooling and only 3.75% energy for cooling equalling a massive 90% saving on cooling

The backup water source at the nearby lake had large coil heat exchangers deployed and a reverse cycle heat pump, this meant during the winter months the supply could switch so waste heat from the data centre could be recycled to heat their building free of charge.

100% Watertight security with the unique Leak Prevention System

The installation also benefits from having the patented Leak Prevention System designed into the solution, which gives it watertight peace of mind, so there is no risk of any water escaping from the system pipework or rear coolers.

Due to the success, cost and energy savings of this project, STIHL plan to upgrade a second data centre in their organisation in the very near future.



Project Summary

Energy efficiency and cost savings

- Low CAPEX and fast ROI
- 7.5kW to cool 200kW
- Year on year energy savings
- Low carbon
- Free cooling all year round
- 90% energy savings on their existing data centres
- Security and control
- LPS Leak Prevention System - water tight security
- Tier 3 (N+1) redundancy

This environmentally friendly low-cost cooling option works so well with the borehole water supply, all the data centre cooling is free, efficient, and safe.

A second data centre will be utilising this solution to maximise energy resources.

STIHL®

To learn more visit :

www.legrand.com/datacenter

 Legrand Data Center Solutions

©2025 Legrand.