

# CASE STUDY

## DATA CENTRES

Data centres are at the very heart of modern society and are central to the global economy.



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## THE CHALLENGE

Most of our personal and business data is stored in data centres, where computing and digital storage systems are securely kept and maintained.

The importance and sensitivity of data centre technology means that an ideal temperature is required to stop critical IT equipment overheating. This requires sophisticated cooling systems that can be easily disrupted by external airborne debris, such as seeds, leaves, insects and litter. These airborne elements are naturally drawn inside air inlets, blocking fin coils and providing a potential food source for bacteria. When airflow is restricted, cooling efficiency is reduced leading to performance issues, increased risk of component damage and costly repairs and maintenance.

Furthermore, unnecessary and inefficient expenditure of energy in data centres leads to a costly PUE (power usage effectiveness). In line with global aspirations for data centres to be carbon neutral by 2030, actions need to be taken to improve efficiency and reduce energy wastage.

## THE SOLUTION

In areas densely populated with trees, data centres often struggle with an influx of seeds, pollen, insects and leaves. In urban and rural areas, litter can also cause concern. Consequently, a build-up of debris over time can lead to blockages and in the right environment potentially hazardous bacterial growth.

Removing debris from data centre air coolers can be expensive and time-consuming, so the best course of action is to prevent it from happening in the first place, rather than constantly cleaning internal cooling equipment.

A cost-effective solution with immediate results is to install debris filter screens, which can trap airborne debris and prevent the fouling of internal heat exchange components. With filter screens in place, maintaining optimal temperatures in data centres is easier, and cooling systems can operate all-year-round without disruption, reducing unnecessary energy consumption or system downtime.

Galebreaker provides world class debris screens to some of the world's largest technology companies. Easy-to-install, our debris filter screens can be up to 72m long and 3m high, rolling or fixed depending on your needs, with manual or automatic operation.

Designed to withstand wind speeds of up to 60mph, our specifically designed fabrics come with different porosities of mesh, and have low pressure drop coefficients to help maintain airflow in critical areas.

For all installations we offer a comprehensive site survey to understand and create a customised solution for your building.

## THE RESULTS

The right debris filter screens will trap airborne debris, prevent blockages and bacterial growth, and ensure all data centre equipment continues to run efficiently, at the optimal temperature.

This will help reduce maintenance costs and improve component efficiency and lifespan. The average time to ROI on a debris filter screen installation is between 6 to 18 months.

“*In many data centres around the world, a lot of unnecessary energy is being used to cool and maintain IT equipment. When cooling systems become clogged with debris, they become even more inefficient. By installing long-lasting debris filters that have been extensively tested for this purpose, technology businesses can reduce their costs and maximise energy efficiency, which has a long-term and positive impact on the environment.*”

Jamie Wilde

For more information on our data centre cooling solutions in your region, please get in touch with the Galebreaker Team.

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