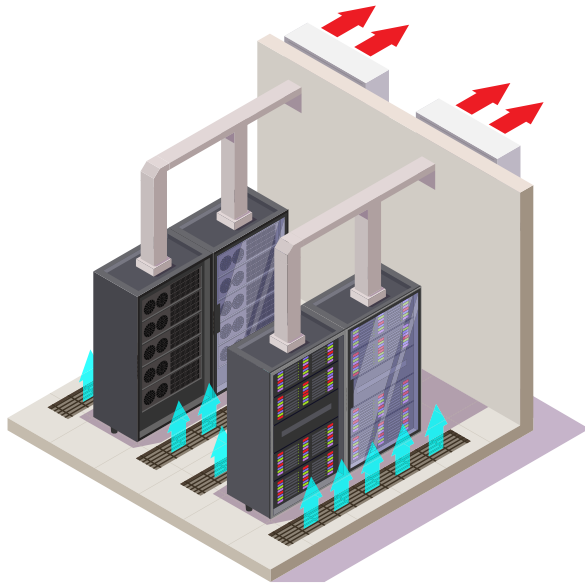


Rubber Fab

a Garlock Hygienic Technologies company

Case Study: Keeping Data Centers Cool Full Range of Particulate Elimination



INDUSTRY

Data Infrastructure

CUSTOMER

Large Data Center and Networking Solution Providers

BACKGROUND

A Data Center is a building, a dedicated space within a building, or a group of buildings used to house computer systems and associated components, such as telecommunications and storage systems. Data centers are an integral part of processing innovations. The modern age needs functional data centers to process and transfer large amounts of data, a process that generates a lot of heat. For these facilities to work efficiently, they need data center cooling systems in place. Crucial for business continuity, so it generally includes redundant or backup components and infrastructure for power supply, data communication connections, and environmental controls. High demand for electricity from data centers has increased strain on local grids and has increased electricity prices in some markets, thus driving the need for more efficient power usage. With increasing dependency on computing and AI resources, data centers are a fundamental part of our world, and will play an increasing role as our communities & societies rely more on IT data and functionality.

CHALLENGE FACED

As data center density increases, overheating and performance degradation are growing concerns. Liquid cooling has emerged as a more efficient and effective heat management solution in these environments where traditional air cooling is often insufficient. Liquids offer superior heat transfer, leading to improved data



center performance. Maintaining the purity of these cooling liquids, ensuring they remain free of debris and buildup, is crucial for maximizing heat dissipation.

OPERATING CONDITIONS

1. Recommended Temperature Range: 18°C (64°F) to 27°C (80°F)
2. Recommended Humidity Range: -9°C (16°F) DP (Dew Point) to 15°C (60°F) DP (Dew Point) and 60% RH (Relative Humidity)
3. Application: Hose Assembly filtration for cooling liquid transfer
4. Media: liquid cooling, common coolants include water, deionized water, glycol/water solutions, and dielectric fluids like fluorocarbons and mineral oils
5. Pressure: Various
6. Size: Various

SOLUTION AND BENEFITS

Rubber Fab's Full Range of Particulate Elimination. The complete elimination of particulates is critical to ensure maximum cooling and flow rates in the data center market. Consider the full range of Rubber Fab's Fluid Filtration technology. Our fluid filtration gaskets and socks provide the most comprehensive range of stainless-steel mesh and filter cloth, providing a comprehensive elimination of particulate in the flow path, protecting equipment that is in the fluid flow path.

Specifically, the extended sock-shaped mesh gasket offers up to 5 times more open area for 5 times more soil collection capability than conventional screens. They provide greater flow for situations where it is imperative that particulate is removed to ensure maximum cooling capabilities and flow. Due to the large capacity and open screen area, sock screens require less service therefore reducing downtime and costly change-outs, a major consideration with in-line data cooling processes. While protecting expensive processing equipment from foreign matter, sock screens are especially effective in decreasing pump wear and burnout while increasing energy conservation. Regularly used in the transfer of cooling liquids, sanitary sock screens are specifically designed for high volume applications with low pressure drop.

For more information, please visit: www.rubberfab.com