

Europe Data Center Liquid Cooling Market: Focus on Product, Application, and Country Analysis - Analysis and Forecast, 2024-2034

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Abstracts

Introduction to Europe Data Center Liquid Cooling Market

The Europe data center liquid cooling market (excluding U.K.), valued at \$1,205.1 million in 2024, is expected to reach \$8,884.4 million by 2034, exhibiting a robust CAGR of 22.11% during the forecast period 2024-2034. The market for liquid cooling for data center has been expanding quickly due to the growing need for sustainable and energy-efficient cooling solutions to support hyperscale data center, artificial intelligence (AI), and high-performance computing (HPC). The widespread use of cutting-edge technologies like immersion and direct-to-chip cooling, which provide higher thermal efficiency and lower power consumption than conventional air cooling systems, is one of the main reasons.

Alongside developments in liquid cooling systems that enable better server density and operational reliability, regulatory efforts to attain net-zero goals and lower carbon footprints are promoting adoption. Innovative cooling fluids and scalable solutions for growing AI workloads and 5G applications are being developed by industry participants. However, issues such as high implementation costs and little standardisation remain. Notwithstanding these challenges, liquid cooling maintains its status as a game-changing technology in data centre operations by helping to manage the rising heat densities of contemporary IT architecture while fostering sustainability and maximising performance.

Market Introduction

The market for liquid cooling for data center in Europe is expanding significantly as a

result of the growing expectations for sustainability, energy efficiency, and improved performance from data center throughout the area. Data center are become increasingly power-dense due to the quick growth of cloud computing, big data, AI, and IoT. This creates a significant amount of heat that is difficult for conventional air-cooling systems to handle. Because they provide better thermal control, lower energy consumption, and lower operating costs, liquid cooling technologies—such as direct-to-chip cooling and immersion cooling—are becoming more and more popular.

Data centre operators are being pressured to use greener cooling techniques by European governments and regulatory agencies, which are aggressively promoting eco-friendly solutions. The trend towards liquid cooling is also being aided by stringent carbon emission rules and the growing cost of electricity. In order to accommodate these cutting-edge cooling methods, major IT businesses and colocation providers are investing in next-generation data centre equipment.

The market has a lot of room to develop, but obstacles including high upfront prices, complicated retrofitting, and a lack of internationally standardised technologies could make adoption more difficult. These obstacles should be removed, though, with sustained innovation, government assistance, and growing recognition of the long-term efficiency advantages. Europe is therefore well-positioned to play a significant role in the global shift to liquid-cooled data center.

Market Segmentation:

Segmentation 1: by End-Use

IT and Telecom

Banking, Financial Services, and Insurance (BFSI)

Government and Public Sector

Healthcare

Manufacturing

Retail

Others

Segmentation 2: by Data Center

Hyperscale Data Center

Enterprise Data Center

Colocation Data Center

Others

Segmentation 3: by Solution

Rear Door Heat Exchangers (RDHX)

Direct Cooling

Direct-to-Chip Liquid Cooling System

Immersion Cooling System

Segmentation 4: by Region

Europe

U.K.

Market trends, Drivers and Challenges of Europe Data Center Liquid Cooling Market

The need for improved energy efficiency, sustainability, and efficient thermal management is propelling the fast-growing European data center liquid cooling market. High-performance computing and the growing density of data center necessitate cooling technologies that perform better than conventional air-cooling systems. Because they provide better thermal performance and lower operating costs, technological innovations like immersion cooling and creative liquid cooling infrastructures are

becoming more and more popular. Through the promotion of green technologies and energy-efficient practices, government initiatives and stringent energy restrictions throughout Europe further stimulate market growth. High upfront capital costs, complicated integration with existing systems, worries about possible leaks, and long-term dependability are some of the market's obstacles, though. Uniform adoption is further hampered by the fragmented regulatory environment and the absence of standardised standards among European nations. Despite these obstacles, the market for liquid cooling in data center in Europe appears to have a bright future due to strong investments in hyperscale data center and ongoing innovation in liquid cooling technologies.

How can this report add value to an organization?

Product/Innovation Strategy: The product segment helps the reader understand the different application and product segments of Europe data center liquid cooling and their potential in Europe Region. Moreover, the study gives the reader a detailed understanding of the different regulations, consortiums and associations, and government programs impacting the liquid cooling manufacturers for various purposes, including data centers.

Growth/Marketing Strategy: The Europe data center liquid cooling market has seen major development by key players operating in the market, such as business expansion, partnership, collaboration, and joint venture. The favored strategy for the companies has been partnership, collaboration, and joint venture activities to strengthen their position in the Europe data center liquid cooling market.

Competitive Strategy: Key players in the Europe data center liquid cooling market analyzed and profiled in the study involve liquid cooling providers, including market segments covered by distinct product kinds, applications served, and regional presence, as well as the influence of important market tactics employed. Moreover, a detailed competitive benchmarking of the players operating in the Europe data center liquid cooling market has been done to help the reader understand how players stack against each other, presenting a clear market landscape. Additionally, comprehensive competitive strategies such as partnerships, agreements, and collaborations will aid the reader in understanding the untapped revenue pockets in the market.

Key Market Players and Competition Synopsis

The companies that are profiled in the Europe data center liquid cooling market have

been selected based on input gathered from primary experts and analyzing company coverage, project portfolio, and market penetration.

Some of the prominent names in this market are:

Asetek, Inc.

Asperitas

DCX INC.

Iceotope

Submer

Rittal GmbH & Co. KG

Legrand

STULZ GMBH

Danfoss

nVent

ALFA LAVAL

Kelvion Holding GmbH

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