

# **Water-based Heating & Cooling Systems Market by Heating (Heat Pump, Convective Heater, Radiator, Boiler), Cooling (Chiller, AHU, Cooling Tower, Tank), Cooling Type (Direct, Indirect), Implementation Type, Vertical & Region - Global Forecast to 2028**

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## **Abstracts**

The global water-based heating & cooling systems market is expected to be valued at USD 37.7 billion in 2023 and is projected to reach USD 55.2 billion by 2028; it is expected to grow at a CAGR of 7.9% from 2023 to 2028. Government regulations and industry standards play a significant role in driving the development and adoption of low-GWP refrigerants. Countries and regions are implementing measures to phase out high-GWP refrigerants and promote the use of environmentally friendly alternatives. Organizations like the European Union's F-Gas Regulation and international agreements like the Kigali Amendment to the Montreal Protocol provide guidelines and targets for the phase-down of high-GWP refrigerants.

"AHU in cooling component to account for the second largest market share for water-based cooling systems market."

Air Handling Units (AHUs) play a crucial role in water-based cooling systems, serving multiple key use cases. One major application of AHUs is in large commercial or industrial buildings where central air conditioning is required. AHUs are responsible for circulating cooled air throughout the building, maintaining a comfortable indoor environment. Additionally, AHUs are commonly used in data centers, where precise temperature and humidity control are essential for the reliable operation of sensitive equipment. By incorporating AHUs into water-based cooling systems, data centers can efficiently remove the heat generated by servers and other electronics, maintaining optimal operating conditions.

“Commercial vertical to account for the highest CAGR of water-based heating & cooling systems market.”

Water-based heating and cooling systems are an essential component of modern office buildings as they provide a comfortable and healthy indoor environment for occupants. The water-based heating and cooling systems in office buildings include various components such as air handling units, chillers, boilers, cooling towers, and radiators. Thus, the increasing demand for economic and cost-saving HVAC systems in offices is expected to propel the growth of the water-based heating and cooling systems market.

“US to grow at the highest CAGR for North American water-based heating & cooling systems market.”

The tech industry in the US is creating a demand for new residential and commercial buildings, as well as improved transport infrastructure, for the accommodation of many workers. Companies such as Google, Apple, Facebook, Microsoft, and Amazon are encouraging significant investments to install HVAC systems across different buildings. Moreover, according to the American Society of Civil Engineers, the US needs to spend ~USD 4.5 trillion by 2025 on improving the state of the country's airports, schools, and roads.

The study contains various industry experts' insights, from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type: Tier 1 – 40%, Tier 2 – 25%, and Tier 3 – 35%

By Designation: C-level Executives – 33%, Directors – 48%, and Others – 19%

By Region: North America – 40%, Europe – 35%, Asia Pacific – 18%, RoW – 7%

The key players operating in the water-based heating & cooling systems market are Daikin (Japan), Johnson Controls (US), Carrier Global Corporation (US), Trane Technologies (US), and Fujitsu (Japan).

The research report categorizes the water-based heating & cooling systems market by Heating Component (Heat Pumps, Convector Heaters, Radiators, and Boilers), by Cooling Component (Chillers, AHUs, Cooling Towers, and Expansion Tank), by Cooling

Type (Direct, Indirect), by Implementation Type (New Construction, Retrofit), by Vertical (Residential, Commercial, and Industrial), and by region (North America, Europe, Asia Pacific, and RoW). The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the water-based heating & cooling systems market. A detailed analysis of the key industry players has been done to provide insights into their business overviews, products, key strategies, Contracts, partnerships, agreements, new product & service launches, mergers and acquisitions; and recent developments associated with the water-based heating & cooling systems market. Competitive analysis of upcoming startups in the water-based heating & cooling systems market ecosystem is covered in this report.

Research Coverage:

Key Benefits of Buying the Report

Analysis of critical drivers (Increasing demand for energy-efficient water-based heating and cooling systems, Increasing constructions activities in residential and industrial sectors, Government regulatory policies and incentives to ensure energy saving and conservation of natural resources, and Growing demand for indoor and outdoor air quality), restraints (High maintenance, repair and installation costs for water-based heating and cooling systems, Limited space in commercial and residential buildings for large water-based heating and cooling systems, Lack of technical knowledge to the owners and shortage of skilled labor), opportunities (Rapid transformation of IoT within HVAC industry, Growing Demand for Sustainable Solutions, and Efforts to develop next-generation low global warming potential refrigerants), and challenges (Lack of awareness about benefits of water-based systems in developing countries, and Increase in environmental concerns and aging infrastructure) influencing the growth of the water-based heating & cooling systems market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the water-based heating & cooling systems market

Market Development: Comprehensive information about lucrative markets – the report analyses the water-based heating & cooling systems market across varied regions.

Market Diversification: Exhaustive information about new products, untapped

geographies, recent developments, and investments in the water-based heating & cooling systems market

**Competitive Assessment:** In-depth assessment of market shares, growth strategies, and service offerings of leading players like Daikin (Japan), Johnson Controls (US), Carrier Global Corporation (US), Trane Technologies (US), Fujitsu (Japan), among others in the water-based heating & cooling systems market.

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\*Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.



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