

Train HVAC - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Train HVAC Market size is estimated at USD 15.35 billion in 2025, and is expected to reach USD 18.15 billion by 2030, at a CAGR of 3.4% during the forecast period (2025-2030).

During the outbreak of the COVID-19 pandemic, the work for the expansion of rail networks was halted because of the imposed lockdown and social distancing norms to control the spread of the virus. Yet, with the gradual opening of economies, the rail expansion work has resumed, and the governments are expected to invest more money for the development of these activities and bring the economy back on track. This trend is expected to follow during the forecast period as well.

As the world's population grows, so does the need for quicker, safer, and more pleasant transportation. As a result, governments throughout the world are spending extensively on railway infrastructure development, which is propelling the industry forward.

The train HVAC market is majorly driven by the increasing demand for HVAC systems from railways over the forecast period. In addition, the increase in demand for public transport by the government is also expected to boost the growth of the railway HVAC market. Additionally, the rising demand for comfort during traveling plays a significant role in fueling the growth of the railway HVAC market throughout the forecast period.

Train HVAC Market Trends

Increasing Demand for Rapid Transit

In order to meet the growing transportation needs across the world, several governments are expanding their rapid transit

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networks within the countries to make public transportation more feasible for the population. The governments of major countries are investing heavily in developing urban rail transit. The focus is on developing high-speed trains for passenger travel.

Modern services on rapid transit systems are provided on designated lines between stations, typically using electric multiple units on rail tracks. The stations typically have high platforms, requiring custom-made trains to minimize gaps between trains and platforms. They are typically integrated with other public transport modes and often operated by the same public transport authorities.

Some of the major countries with rapid transit systems are China, South Korea, Japan, Mexico, and the United States.

China has the most rapid transit systems in the world, with 31 systems covering over 4,500 kilometers of track. It was in charge of the majority of the world's rapid transit expansion initiatives during the last decade. The Shanghai Metro is the world's longest single-operator rapid transit system (in terms of route length).

In February 2022, the Indian government announced 400 new-generation Vande Bharat trains with better energy efficiency and passenger riding experience will be developed and manufactured during 2022-2025.

Similarly, in February 2022, South Korea announced goals to cut 30% of carbon emissions from railway travel by replacing all diesel passenger locomotives with a new bullet train by 2029. Also, South Korea plans to be carbon neutral by 2050.

Also, in July 2021, Amtrak announced a new agreement with infrastructure provider Siemens Mobility to build and execute a fresh new fleet of 83 trains that will travel across the northeastern United States in a significant modernization.

Asia-Pacific Will Exhibit the Highest Growth Rate

The Asia-Pacific region is dominating the train HVAC market, owing to countries with huge populations, such as China and India. China, with its expansion of railway infrastructure, and India, with its many urban transit and railway corridors, are pushing the demand for market growth.

Over the past decade, China experienced large-scale and rapid urban rail transit developments. Urban rail transit in China has been developing a networked structure, intellectualized equipment, diversified systems, and innovative technology in recent years. The trend is shifting toward the adoption of large-capacity subways in the central areas of super cities and megacities, with the adoption of a medium-capacity monorail, inner-city rapid rail transit, and magnetic suspension trains between central urban areas and remote towns.

- In December 2021, China's National Development and Reform Commission (NRDC) approved the construction of a new 350 km/h high-speed line, a 160 km/h mainline, and three metro lines in Wuxi, with an overall investment totaling CNY 248.5 billion (USD 38.55 billion).
- In January 2021, the Bombardier Sifang (Qingdao) Transportation (BST) joint venture secured a contract from China State Railway Group (CHINA RAILWAY) to deliver 16 new Chinese standard high-speed CR400AF cars. The value of the contract is approximately USD 46 million.

The Indian government is launching a number of projects to modernize its old railway infrastructure and improve service quality. The Railway Ministry said that it intends to invest INR 5,000,000 crore (USD 660 billion) in railway upgrades by 2023. Upgrades include complete electrification of railways, upgrading existing lines with more facilities and faster speeds, expanding new lines,

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upgrading railway stations, introducing and eventually developing a large high-speed train network connecting major cities across India, and developing various dedicated freight corridors to reduce cargo costs within the country.

Global players, such as Alstom, Bombardier, and Hyundai Rotem, have already set up manufacturing plants in India. CRCC also entered an MoU with the Government of Maharashtra for setting up a manufacturing facility in the Multimodal International Cargo Hub and Airport at Nagpur (MIHAN).

Train HVAC Industry Overview

The train HVAC market is dominated by manufacturers such as Trane Technologies, Mitsubishi Electric, Merak SA, Honeywell International, and Siemens AG. Several players in the market announced collaborations and partnerships to develop new products. For instance

- In July 2021, Honeywell announced that it would partner with Trane Technologies to accelerate the transition to a next-generation, environmentally preferable refrigerant by field testing Honeywell's Solstice N41 (R-466A), the industry's first non-flammable alternative to R-410A. Trane will deploy and test Solstice N41 at three customer locations in different parts of the United States as part of a one-year field trial.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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