

Truck Refrigeration Unit Market by Vehicle Type (Light, Medium & Heavy Commercial Vehicles and Trailers), Type, End Use Industry, Application, Trailer Size, Power Source, Mode of Operation, Unit Propulsion, and Region - Global Forecast to 2030

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Abstracts

The truck refrigeration unit market is projected to grow to USD 8.83 Billion in 2030 from USD 6.83 Billion in 2024 at a CAGR of 4.4 %. Cold chain logistics plays a crucial role in the pharmaceutical industry. Growing demand for drugs, vaccines, blood, and biologics, among others, has shown notable growth in recent years, leading to the growth of truck refrigeration units. For instance, the Pfizer-BioNTech vaccine had to be stored at -70°C (-94°F), Insulin must be stored at temperatures between 2°C to 8°C and blood cells, and plasma is stored at -18°C to maintain their efficacy. Due to changing lifestyles, polluted air, and water, people are exposed to more health issues, ultimately leading to higher demand for drugs. This will drive the growth of refrigeration units in this industry.

'The Nose mounted units are estimated to have the largest share in the Truck Refrigeration Unit market by Type.'

Nose-mounted units, as the name suggests, are mounted on the outer side of the front wall of the truck/trailer. According to MarketsandMarkets analysis, nose-mounted units are estimated to have the largest share in the truck refrigeration unit market by type owing to their economical pricing structure. Nose-mounted units can provide better airflow distribution for the cargo area. The positioning of these units helps with airflow as the air can easily circulate from the front to the back of the cargo area. Positioning these units helps with easier maintenance as these units are easily accessible compared to rooftop units.

Moreover, nose-mounted units do not affect the aerodynamics of the vehicle. It is easy to utilize engine-driven technology in nose-mounted units, making it a preferred option for light commercial vehicles. For trailers and heavy commercial vehicles, the nose-mounted units are independently powered by a separate engine or battery, in the case of hybrid/electric units. The primary driver for nose-mounted truck refrigeration units is easier maintenance, lower costs, and adaptability to all vehicle types.

'Independent units are estimated to be the fastest growing truck refrigeration units during the forecast period.'

Independent truck refrigeration units run on their own power source, such as a diesel engine or electric motor powered by a separate battery, to maintain the right temperature for transporting perishable goods. These units are self-propelled and don't rely on the vehicle's engine, allowing them to keep working even when the vehicle is stationary. This makes them useful during loading and unloading, ensuring temperature control is maintained. The main advantages of independent units over engine-powered ones are greater flexibility. Additionally, independent units can be easily adapted to different types of vehicles and transportation needs, offering greater range of application. The costs of independent units are very high compared to engine powered units. As per primary insights the estimated prices of independent units are around 2.5x to 3x to that of engine powered units, depending upon the storage capacity. The additional costs for independent units include the separate engine, fuel tank, and additional components.

Independent truck refrigeration units are mostly preferred for multi-purpose logistics. These units can carry frozen, chilled and low temperature items in a same truck/trailer by making separate compartments for individual items. The market for independent units is expected to propel during the forecast period

'Asia Pacific is estimated to be the second largest market for Truck Refrigeration Units.'

The Asia-Pacific region is expected to be the second-largest market for truck refrigeration units, driven by several key factors. The demand for refrigerated transport is increasing due to the rising consumer preference for frozen and chilled food products and the increasing need for transporting temperature-sensitive pharmaceuticals and medical supplies. The rapid growth of e-commerce in the region has boosted the market for last-mile logistics to ensure that perishable items are reached in the suitable form consumers desire. Developing countries like India and China are leading the growth of this market. Additionally, stringent regulations for food quality drive businesses to invest

in advanced refrigeration technologies, like electric and hybrid units, solidifying the region's position as a significant contributor to the truck refrigeration unit market. The region also has a few manufacturers and technology developers for the Truck Refrigeration Units. These include Denso Corporation (Japan), Daikin Industries, Ltd. (Japan), Mitsubishi Heavy Industries, Ltd. (Japan) and Subros Limited (India).

The breakup of primary respondents

By Company: Refrigeration Unit Manufacturers – 70%, Dealers/Distributors -30%

By Designation: Managers - 40%, Directors - 30%, Others – 30%

By Region: Europe - 30%, Asia Pacific - 50%, Americas - 20%

The Truck Refrigeration Unit market will be dominated by global players, including Carrier Transicold (US), Thermo King (US), Denso Corporation (Japan), Daikin Industries, Ltd. (Japan), Webasto Group (Germany), Mitsubishi Heavy Industries, Ltd. (Japan), Utility Trailer Manufacturing Company, LLC. (US), Kidron (US), Subros Limited (India), Advanced Temperature Control (US). The study includes an in-depth competitive analysis of these key players in the Truck Refrigeration Unit market with their company profiles, recent developments, and key market strategies.

Research Coverage

The study's primary objective is to define, describe, and forecast the Truck Refrigeration Unit market by volume and value. The study segments the Truck Refrigeration Unit Market by Vehicle Type (Light Commercial Vehicles, Medium and Heavy Commercial Vehicles and Trailers), by Type (Nose mounted system and Roof Mounted system), by End Use Industry (Food, Pharma and Drugs and Others), by Application (Frozen and Chilled), by Trailer size (Below 40 feet, above 40 feet), by Power Source (Engine powered and Independent), by Mode of Operation (Single temperature and Multi temperature), by Unit Propulsion (Diesel and Electric/Hybrid) & Region (Americas, Europe, and Asia Pacific). It analyzes the opportunities offered by various market segments to the stakeholders. It tracks and analyzes competitive developments such as market share analysis, pricing analysis, technology comparison, and other activities by key industry participants.

The report provides insights on the following pointers:

Analysis of key drivers (Rising demand for cold chain solutions in chemical and pharmaceuticals industries and Growth in the food and beverages industry), Restraints (higher initial investment), opportunities (Surge in investment to increase cold chain logistics and Technological innovations in Refrigerated systems and equipment), and challenges (Management of regulatory compliance) are fueling the demand of the Truck Refrigeration Unit market.

Product Development/Innovation: Detailed insights into upcoming technologies, research & development activities, and new product & service launches in the Truck Refrigeration Unit market.

Market Development: Comprehensive information on the lucrative emerging markets by units, applications (frozen and chilled), propulsions (diesel and electric/hybrid) and regions (Asia Pacific, Americas and Europe)

Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the Truck Refrigeration Unit market

Competitive Assessment: In-depth assessment of market ranking, growth strategies, and product offerings of leading players in the Truck Refrigeration Unit market, such as Carrier Transicold (US), Thermo King (US), Denso Corporation (Japan), Daikin Industries, Ltd. (Japan), Webasto Group (Germany) Mitsubishi Heavy Industries, Ltd. (Japan), Utility Trailer Manufacturing Company, LLC. (US), Kidron (US), Subros Limited (India), Advanced Temperature Control (US).

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