

Global and India Type 4 Cylinders Market

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Global and India Type 4 Cylinders Market, Growth Rate, Covid-19 Impact, Economic Impact, Size, Share, Trend, Drivers, Competitive Landscape, Opportunity, Limitations, Technological Landscape, Regulatory Framework, PESTEL Analysis, PORTERs Analysis, Forecast upto 2030

The global and India type 4-cylinder market is expected to grow significantly owing to the mounting urbanization and accelerating disposable income

The global type 4-cylinder market size was valued at USD 279.31 Million in 2021 and is expected to grow at a CAGR of 7.46% during the forecast period. However, India's type 4-cylinder market is projected to reach USD 23.11 Million by 2030 at a growth rate of 7.73%. The growth in demand for lightweight cylinders with higher pressure requirements, more gas carrying capacity per cylinder and the rising number of natural gas vehicles (NGVs) are the main factors driving the type 4-cylinder market. Additionally, the market for type 4 cylinders is anticipated to grow significantly due to increased technological innovation and investments from the major players. Further, the surge in demand for lightweight, explosion proof and non-corrosive LPG & CNG cylinders and government push towards the usage of composite cylinders are propelling the growth of the type 4-cylinder market in the future periods.

Preference of end users for type 4- cylinders due to their ease of handling and partial visibility is driving the demand in the type 4-cylinder cylinder market. The Internet of Things (IoT)-powered smart composite cylinder communicates to customer devices and the LPG distributors' IT infrastructure. The system allows distributors to adjust their supply logistics and stocks in real-time and notifies users of the amount of gas still in their cylinders. The growing adoption of type 4- cylinders across various end-use sectors, including automotive, marine & defense, household, fleet owners, oil industry and others, owing to numerous benefits of these cylinders over traditional metal cylinders such as improved safety, lighter weight, and superior corrosion resistance are estimated to influence the growth of type 4- cylinders market over the forecast periods.

Cylinder Type Overview in the Global Type 4-cylinder Market

Based on cylinder type, the global type 4-cylinder market is classified into CNG, biogas, hydrogen, and LPG. The CNG segment generated USD 131.50 million in revenue in 2021 and

is expected to reach USD 240.24 million by 2030 with a CAGR of 7.11% during the forecast period, 2022-2030. The segment's growth is attributed to Type 4 CNG Cylinders, typically around 70% weight reduced over Type 1 and 2 Steel cylinders and 5% to 35% weight reduced over Type 3 Aluminum liner-based cylinders because of the presence of lightweight HDPE liner. The Type 4 cylinders have higher Class pressure withstanding capacity when compared with Type 3 cylinders.

Fiber Type Overview in the Global Type 4-cylinder Market

Based on fiber type, the global type 4-cylinder market is segregated into glass fiber composites and carbon fiber composites. The carbon fiber composites segment captured the highest market of 55.96% in 2021 and is projected to reach USD 288.21 million by 2030. It is due to this carbon fiber coating ensures higher heat resistance, helically wound on the liner in combination with resin to impart high tensile strength.

Glass fiber is estimated to hold a considerable share in the global type 4-cylinder market over the forecasted period of 2022-2030. Glass fiber composites are a particular kind of fiber-reinforced polymer composite with qualities like low density, high strength, and simplicity in production. As a result, the aerospace, automotive, and construction industries all utilize it substantially. Glass fibers are the most typical reinforcing fiber used in polymeric matrix composites.

Application Overview in the Global Type 4-cylinder Market

Based on the application, the global type 4-cylinder market is segmented into industrial, household, marine & defense, fleet owners and others. The industrial segment is further sub-segmented into the automotive industry, oil & gas industry, chemical industry and others. The industrial segment generated USD 127.70 million in revenue in 2021 and is expected to reach USD 232.38 million by 2030 with a CAGR of 7.07% from 2022-2030. The segmented growth is attributed to the growing demand for CNG, biogas and hydrogen gas in commercial and private vehicles. Natural gas is a proven alternative fuel that has long been used to power natural gas vehicles. These cylinders are 30% of the weight of steel, improving vehicle range, payload, handling and reducing fuel consumption.

Distribution Channel Overview in the Global Type 4-cylinder Market

Based on the distribution channel, the global type 4-cylinder market is segmented into OEM and gas distribution companies. The OEM segment holds the highest market share of 65.47% in 2021 and is projected to generate USD 335.81 million by 2030. It is because major type 4-cylinder manufacturers have started their distribution channel and marketing & sell offices in developing nations worldwide. The high prices of these cylinders prohibit gas distribution companies from immediately adopting steel cylinders with the type-4 composite cylinder in under-developed and developing countries.

Regional Overview in the Global Type 4-cylinder Market

By region, the global type 4-cylinder market is segmented into North America, Europe, Asia Pacific, South America, and Middle East & Africa. The Europe region generated USD 101.63 million in revenue in 2021 and is likely to reach USD 165.14 million by 2030 with a CAGR of 6.98% during the forecast period, 2022-2030. There has been a substantial growth in the use of automobiles in Europe emerging nations, which has increased the demand for fossil fuels. The government announced several support policies to encourage the development of natural gas-powered automobiles for commercial use to decrease the imports of fossil fuels. Furthermore,

the benefits of using natural gas in the transportation sector will favor the environment, which is expected to drive the market.

Global and India Type 4-cylinder Market: Competitive Landscape

Hexagon Composites, Luxfer Gas Cylinder, Aburi Composites, Faber IndustrieSpA, Time Technoplast Limited, Indoruss Synergy, Everest Kanto Cylinder Limited, Worthington Industries, Inc., Supreme Industries Ltd., and others prominent Players are the key players in the global type 4-cylinder market.

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