

Asia Pacific Turboexpander Market Forecast to 2030 -Regional Analysis - by Loading Device (Compressor, Generator, and Hydraulic/Oil Brake), Power Capacity [Less than 1 MW (Up to 500 KW and 500 KW to 1 MW), 1 MW to 20 MW, and More than 20 MW], and End User (Oil and Gas, Power Generation, and Industrial)

https://marketpublishers.com/r/A281C7912674EN.html

Date: August 2024 Pages: 95 Price: US\$ 3,550.00 (Single User License) ID: A281C7912674EN

# **Abstracts**

The Asia Pacific turboexpander market was valued at US\$ 370.28 million in 2022 and is expected to reach US\$ 634.91 million by 2030; it is estimated to record a CAGR of 7.0% from 2022 to 2030.

Use of Turboexpander as Distributed Generator Boosts Asia Pacific Turboexpander Market

Turboexpander is an axial flow or centrifugal turbine used to expand high-pressure gas to generate work that is primarily employed to drive a compressor. This turbine system can be deployed in applications such as ethylene plants, gas transportation, air separation facilities, and refineries to convert the energy of a vapor stream or gas into mechanical work as the vapor or gas expands through the turbine. A turboexpander transforms the wasted energy in the gas into electricity. With the growing demand for cryogenic fluids and advancements in cryogenic industries, the demand for competent turboexpanders is on the rise, especially in space appliances, superconductivity, turbochargers, biomedical and petrochemical industries, and chemical instruments, among others. A turboexpander also works as a distributed generator that can be leveraged to capture the surplus energy. The turboexpander generator decreases gas pressure and transforms the kinetic energy into electrical energy, which can be sold to the grid. The growing application of turboexpanders, owing to their efficiency and



competence in different applications, is anticipated to present opportunities in the turboexpanders market during the forecast period.

Asia Pacific Turboexpander Market Overview

The turboexpander market growth in Asia Pacific (APAC) is attributed to dynamic growth and strategic significance across diverse industries. With a robust energy demand, industrial expansion, and increasing focus on sustainability, turboexpanders have become pivotal components in various sectors. Asia Pacific countries are experiencing a surge in energy demand due to rapid urbanization and industrialization, necessitating the development of efficient energy infrastructure. Turboexpanders play a critical role in energy generation, particularly in power plants, where they harness energy from high-pressure gas streams, contributing to the optimization of energy production. With a growing emphasis on sustainability, several Asia Pacific countries are investing substantially in renewable energy projects, including solar thermal, biomass gasification, and geothermal. Turboexpanders find emerging interest in renewable energy projects in APAC, enhancing energy efficiency and power generation. Moreover, the demand for turboexpanders in petrochemical plants and chemical processing facilities is on the rise with the burgeoning industrial sector in Asia Pacific, notably in countries such as China and India. Owing to the convergence of energy demands, industrial expansion, and sustainability initiatives, turboexpanders are gaining high importance across the energy and petrochemical landscape in this region due to their ability to enhance operational efficiencies.

Asia Pacific Turboexpander Market Revenue and Forecast to 2030 (US\$ Million)

Asia Pacific Turboexpander Market Segmentation

The Asia Pacific turboexpander market is segmented based on loading device, power capacity, end user, and country. Based on loading device, the Asia Pacific turboexpander market is segmented into compressor, generator, and hydraulic/oil brake. The compressor segment held the largest market share in 2022.

In terms of power capacity, the Asia Pacific turboexpander market is categorized into less than 1 MW, 1 MW to 20 MW, and more than 20 MW. The 1 MW to 20 MW segment held the largest market share in 2022. The 1 MW to 20 MW segment is further bifurcated into Up to 500 KW and 500 KW to 1 MW.

By end user, the Asia Pacific turboexpander market is segmented into oil & gas, power,



generation, and industrial. The oil & gas segment held the largest market share in 2022.

Based on country, the Asia Pacific turboexpander market is segmented into Australia, China, India, Japan, South Korea, and the Rest of Asia Pacific. China dominated the Asia Pacific turboexpander market share in 2022.

Elliott Co, Air Products & Chemicals Inc, Atlas Copco AB, Cryostar SAS, Turboden SpA, L'Air Liquide SA, ZJ-Tibo, and Siemens Energy AG are some of the leading players operating in the Asia Pacific turboexpander market.



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