

Air-Operated Double Diaphragm Pump Market Forecasts to 2032 – Global Analysis By Valve Type (Ball Valve and Flap Valve), Material, Pressure Rating, Size, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Air-Operated Double Diaphragm Pump Market is accounted for \$2.25 billion in 2025 and is expected to reach \$3.68 billion by 2032 growing at a CAGR of 7.3% during the forecast period. An Air-Operated Double Diaphragm (AODD) Pump is a type of positive displacement pump powered by compressed air, which alternately drives two flexible diaphragms connected by a shaft. This action creates suction and discharge strokes, enabling the transfer of liquids, slurries, and even viscous or abrasive materials. Known for their self-priming ability, dry-running capability, and safe handling of shear-sensitive fluids, AODD pumps are widely used across industries like chemical, food, pharmaceutical, and wastewater treatment.

Market Dynamics:

Driver:

Rising adoption in wastewater treatment

Air-operated double diaphragm pumps are witnessing growing uptake in wastewater treatment applications due to their ability to handle abrasive, viscous, and chemically aggressive fluids with minimal maintenance. Their self-priming capability and ability to run dry without damage make them ideal for sludge transfer, chemical dosing, and dewatering tasks. Municipalities and industrial facilities are increasingly investing in AODD pumps to meet stricter environmental regulations and improve operational efficiency. The pumps' versatility in handling solids-laden liquids without clogging is a

key factor driving adoption. Rising global focus on water reuse and sustainable effluent management is further boosting demand. As wastewater treatment infrastructure expands, AODD pumps are becoming a preferred choice for reliable and cost-effective fluid handling.

Restraint:

High noise levels compared to alternatives

Despite their operational advantages, AODD pumps often generate higher noise levels than certain centrifugal or electrically driven alternatives. This can be a concern in noise-sensitive environments such as food processing plants, laboratories, or urban installations. Prolonged exposure to high decibel levels may require additional investment in soundproofing or protective equipment for workers. In some cases, noise concerns can influence procurement decisions, especially where regulatory noise limits apply. Manufacturers are working on design improvements and muffler systems, but these can add to overall costs. As a result, noise output remains a limiting factor for broader adoption in specific market segments.

Opportunity:

Rising focus on energy-efficient pumping solutions

The global shift toward energy efficiency is creating strong growth opportunities for AODD pump manufacturers. End-users are seeking pumping systems that reduce compressed air consumption without compromising performance. Technological advancements, such as air distribution system optimization and lightweight materials, are enabling significant energy savings. Industries with high operational costs are particularly motivated to adopt pumps that lower total cost of ownership. Government incentives and corporate sustainability goals are further accelerating the transition to energy-efficient fluid handling solutions. This trend is opening new avenues for innovation and market penetration in both developed and emerging economies.

Threat:

Fluctuations in raw material prices

Volatility in the prices of metals, elastomers, and engineered plastics used in AODD pump manufacturing poses a challenge for producers. Sudden cost spikes in stainless

steel, aluminum, or specialty polymers can erode profit margins and disrupt pricing strategies. Global supply chain disruptions, geopolitical tensions, and currency fluctuations further exacerbate this risk. Smaller manufacturers may struggle to absorb these cost variations, leading to competitive disadvantages. Inconsistent raw material availability can also delay production schedules and impact delivery commitments. As a result, raw material price instability remains a persistent threat to market stability.

Covid-19 Impact

The COVID-19 pandemic initially slowed the AODD pump market due to supply chain interruptions and reduced industrial activity. Lockdowns and restrictions delayed installation projects and limited on-site maintenance operations. However, demand from essential sectors such as pharmaceuticals, food processing, and water treatment provided a partial buffer against severe declines. The crisis also highlighted the value of low-maintenance, versatile pumping solutions in critical operations. As industries resumed activity, pent-up demand and infrastructure investments supported a steady recovery. The pandemic ultimately reinforced the importance of operational resilience and adaptability in pump selection.

The ball valve segment is expected to be the largest during the forecast period

The ball valve segment is expected to account for the largest market share during the forecast period, due to its superior sealing capability and ease of maintenance. Its design allows for efficient handling of abrasive and viscous fluids without significant wear. Industries such as chemicals, mining, and wastewater treatment prefer ball valve AODD pumps for their durability and reduced downtime. The ability to maintain consistent flow rates even with particulate-laden liquids adds to their appeal. Manufacturers are enhancing ball valve designs to improve efficiency and extend service life. This combination of reliability and versatility ensures the segment's dominance in the forecast period.

The chemical segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the chemical segment is predicted to witness the highest growth rate, driven by their ability to safely handle corrosive, abrasive, and high-viscosity fluids without leakage. Advancements in materials, such as PTFE and UHMWPE diaphragms, are enhancing chemical compatibility and service life. Emerging trends include energy-efficient air distribution systems and IoT-enabled monitoring for predictive maintenance. Key developments feature modular designs for easier servicing

and compliance with stringent safety standards. Growing specialty chemical production and stricter environmental regulations are further accelerating adoption across global markets.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share driven by rapid industrialization and infrastructure development. Expanding wastewater treatment facilities, chemical manufacturing hubs, and mining operations are key demand drivers. Countries such as China, India, and Japan are investing heavily in industrial fluid handling systems. Government initiatives promoting environmental compliance are further boosting adoption. The region's strong manufacturing base also supports competitive pricing and product availability. With its diverse industrial landscape, Asia Pacific will remain the anchor market for AODD pumps.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, driven by technological innovation and strong demand from process industries. The region's focus on energy efficiency and regulatory compliance is encouraging the replacement of older pumping systems with advanced AODD models. Growth in sectors such as pharmaceuticals, food and beverage, and water treatment is fueling adoption. Manufacturers are leveraging automation and IoT integration to enhance pump performance and monitoring. Robust after-sales service networks and high awareness of lifecycle cost benefits are further supporting market expansion. With its emphasis on innovation and operational efficiency, North America is emerging as a key growth engine for the industry.

Key players in the market

Some of the key players profiled in the Air-Operated Double Diaphragm Pump Market include Dover Corporation, Depa GmbH, Graco Inc., ARO®, Ingersoll Rand Inc., Warren Rupp, Inc., IDEX Corporation, Blagdon Pump, Xylem Inc., LEWA GmbH, Verder International B.V., Yamada Corporation, Tapflo Group, SPX FLOW, Inc., and Flowserve Corporation.

Key Developments:

In August 2025, Dover Fueling Solutions announced a collaboration with Ardova Plc to bring automation to fuel retail sites across Nigeria, marking the largest project of its kind in the region. The Ardova partnership builds on DFS' well-established presence in the region through its Tokheim® and Wayne® fuel dispenser ranges, representing a new chapter in operational modernization and innovation for Nigeria's downstream sector.

In July 2024, IDEX Corporation announced it has entered into a definitive agreement to acquire Mott Corporation and its subsidiaries for cash consideration of \$1 billion subject to customary adjustments. When adjusted for the present value of expected tax benefits of approximately \$100 million, the net transaction value is approximately \$900 million. This represents approximately 19x Mott's forecasted full year 2024 EBITDA and a mid-teens multiple based on forecasted 2025 EBITDA.

Valve Types Covered:

Ball Valve

Flap Valve

Materials Covered:

Aluminum

Stainless Steel

Cast Iron

Polypropylene

Polyvinylidene Fluoride (PVDF)

Other Materials

Pressure Ratings Covered:

Up to 5 Bar

5–10 Bar

Above 10 Bar

Sizes Covered:

Up to 1'

1'–2'

Above 2'

Applications Covered:

Transfer & Unloading

Spraying & Coating

Filling & Metering

Filtration

Chemical Processing

Other Applications

End Users Covered:

Chemical

Electronics & Semiconductors

Water & Wastewater Treatment

Paper & Pulp

Oil & Gas

Food & Beverage

Pharmaceutical

Marine

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032

- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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