

Medical Gases And Equipment - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

Medical Gases And Equipment Market Analysis

The Medical Gases And Equipment Market size is estimated at USD 18.02 billion in 2025, and is expected to reach USD 25.45 billion by 2030, at a CAGR of 7.14% during the forecast period (2025-2030).

Rising therapeutic demand from aging populations, steady hospital infrastructure upgrades after COVID-19, and rapid innovation in portable concentrators underpin sustained expansion of the medical gases and equipment market. Government-supported oxygen resilience projects, miniaturization of wearable sensors, and the commercialization of low-GWP anesthetic blends further reinforce volume growth, while consolidated gas suppliers leverage scale to secure long-term contracts across acute-care settings. Equipment makers remain fragmented, creating space for bolt-on acquisitions that deepen product portfolios and geographically diversified service footprints, especially in high-growth Asia-Pacific markets. The continued shift toward home-based care amplifies cylinder refilling, small on-site generation, and AI-enabled monitoring demand, collectively shaping the competitive contours of the medical gases and equipment market.

Global Medical Gases And Equipment Market Trends and Insights

Rising Demand for Home Healthcare & POC Oxygen Therapy

Medicare's 36-month rental framework underpins predictable reimbursement, encouraging supplier investment in portable

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devices and reinforcing patient acceptance of at-home oxygen therapy. Technology such as FlexO2 flow selectors has doubled user-initiated adjustments, raising perceived activity capacity scores by 80 points after clinical deployment. Portable concentrators that use optimized zeolite beds now deliver 98.68% oxygen accuracy, narrowing the performance gap with stationary systems. A 13.01% CAGR in the home-care segment illustrates how these improvements align with patient preference for familiar environments. CMS's 2025 payment update, lifting home health rates by 2.5% adds further momentum to decentralized care models. Linde's AIRGENIOUS pilot among sleep-apnea users cut CPAP non-compliance, showcasing predictive analytics for chronic-care adherence.

Growing Prevalence of Respiratory Diseases

COPD remains the chief driver of oxygen admissions, representing 44.5% of respiratory ward volume in tertiary hospitals. Typical bed-based gas demand averages 350 m³ oxygen and 325 m³ medical air each year, scaling directly with discharge volumes and surgical intensity. European planners have already embedded medical gas system upgrades into national respiratory strategies, as shown in the Austrian Masterplan 2025. Analysis of pandemic surges revealed oxygen consumption rising up to 20-fold, anchoring the need for permanent redundancy in supply infrastructure. Poland's Maps of Health Needs initiative highlights how respiratory disease mapping guides investment in gas systems at hospital level.

Stringent Multi-Jurisdictional cGMP & Pharmacopeia Compliance

The FDA's final rule, effective December 2025, mandates full current good manufacturing practice and labeling protocols for medical gases, compelling suppliers to invest in upgraded filling and analytical systems. Hong Kong will classify medical gases as pharmaceutical products from June 2026, introducing a new licensing layer for distributors. Parallel amendments harmonize ISO-based device quality management with cGMP clarifications, raising cross-border compliance costs yet fostering global standard convergence.

Other drivers and restraints analyzed in the detailed report include:

Government-Funded Oxygen Infrastructure Build-Outs Post-COVID / Miniaturization of Portable/Wearable Concentrators & Sensors / Limited Reimbursement for Long-Term Home Oxygen Therapy /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Pure Medical Gases captured 37.81% of the medical gases and equipment market in 2024, reflecting indispensable therapeutic use across hospitals and home settings. Oxygen is projected to record an 8.91% CAGR, aided by expanding home-care adoption and respiratory disease prevalence. Medical Air, Carbon Dioxide, and Helium & Specialty Gases serve surgical insufflation, diagnostics, and MRI needs, though helium supply volatility has driven price escalations that strain hospital budgets. Nitrous Oxide consumption is shifting toward portable cylinders as institutions remove piped lines to curb waste, following UCSF's 80-90% reduction success.

Complementary medical gas equipment ranges from compressors and cylinders to pipeline monitoring systems. Atlas Copco's 2023 Medi-teknique acquisition illustrates consolidation aimed at service breadth and recurring maintenance revenue. BeaconMedaes' global distributor network embeds vacuum and manifold systems within new hospital builds, leveraging multi-mode optical fiber ring networks for real-time alarm capabilities. A rising focus on sustainability is prompting hospitals to adopt low-GWP anesthetic blends. European regulators endorse sevoflurane over desflurane because of its far lower global-warming potential, nudging suppliers to re-engineer recovery and scavenging systems for volatile agents.

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Packaged Cylinders retained a 45.79% share in 2024, yet Portable Concentrators are forecast to grow 9.81% annually as patients demand mobility and healthcare providers emphasize cost-effective chronic-care models. Computational design by Texas A&M shows that dynamic zeolite configurations can tailor oxygen flow to fluctuating patient needs, reducing weight without cutting purity. Meanwhile, Linde recorded 59 small on-site plant wins in 2024, reflecting hospital interest in self-reliant oxygen capacity to hedge against supply disruptions.

Bulk on-site generation continues to attract large tertiary hospitals seeking predictable unit costs, whereas liquid bulk delivery supports specialty centers with ultra-high purity requirements. The continued preference for cylinder backup ensures steady demand across every modality, cementing a diversified revenue mix within the medical gases and equipment market.

The Medical Gases and Equipment Market Report is Segmented by Product (Medical Gases [Pure Medical Gases, and More], and Medical Gas Equipment [Compressors, and More]), Modality (Bulk On-Site Generation, and More), Application (Therapeutic, and More), End User (Hospitals, and More), and Geography (North America, Europe, Asia-Pacific, Middle East and Africa, South America). The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

North America contributed 35.87% of 2024 revenue, anchored by mature payer systems, strict FDA oversight, and widespread adoption of portable concentrators. Hospitals maintain redundant oxygen generation backed by on-site bulk tanks, while home-care penetration continues to rise as CMS refines reimbursement. Regional equipment vendors benefit from clear regulatory pathways that reward innovation without ambiguous market access rules.

Asia-Pacific is projected to grow at 13.51% CAGR, the highest among all regions, driven by large-scale hospital expansion, aging populations, and proactive government funding for medical infrastructure. India's planned capacity additions of 17,800 beds alongside a USD 50 billion medical device roadmap illustrate the underlying demand surge for pipeline systems and cylinders. China's supportive procurement policies post-2024 are expected to unlock medical device spending in 2025, reinforcing the region's status as the foremost growth engine. Air separation unit expansions by Linde and Messer across India and Southeast Asia signal supplier commitment to sustaining regional supply security.

Europe remains a major market, propelled by stringent environmental mandates that accelerate low-GWP anesthesia adoption. The NHS elimination of desflurane has cascaded across continental practice, compelling suppliers to reformulate and hospitals to upgrade recovery systems. Air Liquide's low-carbon oxygen supply contracts in France, Germany, and Brazil showcase the rising importance of Scope 3 emissions in public hospital procurement criteria.

Middle East & Africa and South America collectively represent high-potential but early-stage markets. Investments in tertiary care facilities and the gradual harmonization of pharmacopeia standards will unlock incremental opportunities, although economic volatility and reimbursement fragmentation temper near-term scale.

List of Companies Covered in this Report:

Linde plc / Air Liquide / Air Products & Chemicals / Messer Group / Taiyo Nippon Sanso / Atlas Copco / Beckton Dickinson / Amico Group / Matheson Tri-Gas / GCE Group / NOVAIR / Luxfer Gas Cylinders / Getinge / Drägerwerk AG / INOX Air Products / South African Oxygen (Afrox) / Gulf Cryo / Coregas Pty / SOL Group / Air Water Inc. / Invacare /

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