

Smoke Evacuation Systems - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Smoke Evacuation Systems Market size is estimated at USD 1.93 billion in 2024, and is expected to reach USD 2.35 billion by 2029, growing at a CAGR of 4.03% during the forecast period (2024-2029).

The COVID-19 pandemic posed several risks to the global healthcare system and significantly impacted the smoke evacuation system market. The COVID-19 pandemic caused significant risks for surgeons performing certain types of surgeries. For instance, an article published by the SAGE Journal in May 2021 reported that certain surgeries like laparoscopy were considered to carry some risks of aerosol-type formation and infections. To conduct these surgical procedures, considerable caution was advised. Since the COVID-19 pandemic caused an increased risk of virus transmission due to contamination, it recommended using smoke evacuation devices (SEDs) filtering systems, thereby driving the growth of the studied market. Initially, the growth of the market was impacted due to the increase in COVID-19 cases, which led to the suspension and postponement of non-essential surgical procedures like laparoscopic and other aesthetic surgeries. However, it is anticipated that the decreasing COVID-19 cases are leading to the resumption of surgical procedures, like laparoscopic surgeries. Also, the COVID-19 pandemic has contributed to increasing awareness and regulations of the usage of smoke evacuation systems. As a result, the demand for a smoke evacuation system may increase, and the studied market is expected to witness significant growth in the study period.

The factors that are driving the growth of the studied market are a growing preference for minimally invasive surgeries (MIS) and increased product availability. Due to several advantages associated with MIS procedures over conventional procedures, such as less post-operative pain, fewer major operative and post-operative complications, faster recovery times, less scarring, less stress on the immune system, and smaller incisions, the demand for MIS is significantly increasing.

Also, according to medical guidelines, there is a compulsory requirement for smoke evacuation systems in the operating room.

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For instance, an article published by the SAGE Journal in November 2021 reported that the evidence indicated that exposure to surgical smoke could result in adverse health effects for staff and patients. The article also reported that surgical smoke produces nanoparticles that may enter the blood and lymphatic circulation and may result in adverse respiratory and cardiovascular effects. Thus, there is increasing demand for smoke evacuation systems in hospitals, especially in operating rooms that are driving the growth of the studied market.

Similarly, an article published by the journal WJES, in March 2022 stated that an online survey conducted among the different regions of the world reported that laparoscopy was used in major elective abdominal surgery and about 69.4% of minimally invasive surgery (MIS) procedures performed in the US annually. Thus, the high percentage of MIS procedures leads to an increase in surgical smoke that is increasing the demand for smoke evacuating systems, thereby driving the growth of the studied market.

Furthermore, the increasing product availability and the launch of the new technologically advanced product are driving the growth of the studied market. For instance, in August 2021, eVeck launched Plume Evacuation Kit in response to recent legislation in several US states, directed at protecting medical staff and patients from dangerous constituents in surgical smoke. Thus, such product launches for better protection from smoke from their surroundings to the users are driving the growth of the studied market.

Thus, the growing preference for minimal invasive surgeries and increased product availability aid the market is witnessing significant growth over the forecast period. However, risks associated with smoke evacuation systems may slow down the growth over the studied period.

Smoke Evacuation Systems Market Trends

Laparoscopic Surgeries is Expected to Witness a Significant Growth Over the Forecast Period.

The laparoscopic surgeries segment is expected to witness significant growth over the forecast period owing to the growing prevalence of obesity, chronic diseases, increasing technological advancements, and the growing demand for minimally-invasive surgery such as appendix removal, gall bladder removal, etc.

According to the United Kingdom Obesity Statistics Factsheet published in March 2022, in the year 2020, around three-quarters of those aged 45-74 were overweight or obese, and obesity levels have increased from 15% to 28% in the last three decades. Tissue vaporization procedure generated by using various energy-generating devices such as electrocautery devices, laser systems, ultrasonic and advanced bipolar energy devices generates surgical smoke. Thus, the high prevalence of obesity among the population is expected to drive the laparoscopic surgeries that are increasing the demand for smoke evacuation systems.

Similarly, an article published in the journal Public Health Frontier in May 2022 reported that surgical smoke is composed of over 80 potentially hazardous chemicals, blood and tissue particles, bacteria, and virus particles and surgical plumes in the OR could rightly be considered a biohazard, and may be carcinogenic in some cases. Thus, increasing surgical procedures and hazardous effects associated with smoke during surgery are increasing the demand for smoke evacuation systems. Thus, the increase in laparoscopic surgeries is driving the demand for a high number of smoke evacuation systems, driving the growth of this segment.

The increasing funds to incorporate smoke evacuation systems for safe surgical procedures and growing awareness of the hazardous nature of surgical smoke among the operating room staff, and various medical organizations are constantly propelling the demand for the incorporation of smoke evacuation systems. For instance, in June 2021, Palliare received USD 8 million in Series A funding. This fund was used to support US commercial launch activities related to Palliare's EVA15 insufflator and smoke evacuation system in surgical rooms. Such funding to incorporate smoke evacuation systems for safe surgical procedures is driving the growth of this segment.

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North America is Expected to Witness a Significant Growth Over the Forecast Period.

North America is expected to witness significant growth over the forecast period owing to factors such as the growing cases of both laparoscopic and cosmetic procedures such as botox, where laser treatment resulted in smoke plumes during surgery, an increase in the number of chronic diseases, technological developments due to the presence of key market players and government legislation.

The increase in various surgical procedures in the region is driving the growth of the studied market. For instance, in 2021, the Aesthetic Society Databank reported that 491,098 liposuction procedures were performed in America in the year 2021. Similarly, Canadian Institute for Health Information 2021, reported that about 26,456 appendix removal and 21,941 gall bladder removal surgery procedures were performed among the age group of 18-64 years in Canada in the year 2021. It also reported that appendix removal and gall bladder removal surgeries accounted for 3.8% and 3.1% respectively of all the surgical procedures performed among this age group in Canada. The smoke particles have been associated with several postoperative adverse outcomes across multiple surgical disciplines, including aesthetic surgical procedures, appendix removal surgeries, and gall bladder removal surgeries. Thus, an increase in the number of surgical procedures in North American countries is driving the demand for smoke evacuation systems, thereby driving the growth of the studied market.

Furthermore, the rising prevalence of chronic diseases in the region, technological advancement, and the domicile presence of major players in the region are driving the growth and responsible for ensuring the dominance of the region. For instance, in April 2021, CDC reported that six in ten adults in the United States have at least one chronic disease, and four in ten adults have two or more chronic diseases. Thus, the high prevalence of chronic diseases in the country increases the demand for minimally invasive surgeries. Surgical smoke generated through energy devices may present detrimental effects on individuals present in the operating room thereby increasing the demand for smoke evacuation systems and driving the growth of the studied market.

Also, the government regulations and rules to implement smoke evacuation systems in hospitals are driving the demand for smoke evacuation systems. For instance, in March 2022, at least 12 states were considered for the surgical smoke evacuation legislation with a proposed rule expected out of the Texas Health and Human Services Commission later in 2022. Thus, such rules and legislation are driving the growth of the studied market.

Thus, due to the growing cases of both laparoscopic and cosmetic procedures, an increase in the number of chronic diseases, and technological developments, the region is expected to witness significant growth over the forecast period.

Smoke Evacuation Systems Industry Overview

The smoke evacuation systems market is slightly competitive and consists of many companies operating regionally and globally. Some of the companies which are currently dominating the market are Medtronic Plc., Conmed Corporation, Ecolab Inc., Stryker Corporation, Johnson & Johnson (Ethicon Inc.), Danaher Corporation (Pall Corporation), Olympus Corporation, The Cooper Companies Inc. (Cooper Surgical Inc.), Zimmer Biomet Holdings, Inc., KLS Martin Group, Deroyal, I.C. Medical, Inc., and Erbe Elektromedizin GmbH.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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