

**UAE Minimally Invasive Surgical Devices Market Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By Type (Handheld Instruments {Graspers, Retractors/Elevators, Suturing Instruments, Dilators, Others}, Surgical Scopes (Laparoscopes, Gastroscope, Cystoscope, Ureteroscope, Others}, Cutting Instruments {Trocar's, Other MIS Instruments}, Guiding Devices {Guiding Catheters, Guidewires}, Electrosurgical Devices {Electrosurgery Instruments & Accessories, Electrosurgery Generators, Patient Return Electrodes}, Others), By Surgery Type (Gastrointestinal, Gynecology, Urology, Cardiovascular, Others), By End User (Hospitals & Specialty Clinics, Ambulatory Surgical Centers, Others), by region, and Competition**

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## **Abstracts**

UAE Minimally Invasive Surgical Devices Market is anticipated to witness an impressive growth in the forecast period. Minimally Invasive Surgical (MIS) Devices refer to a category of medical instruments and tools designed to perform surgical procedures with minimal disruption to the body's tissues. These devices are employed in minimally invasive surgery, a surgical approach that involves making small incisions in the body

instead of large, open incisions. The goal is to reduce trauma to surrounding tissues, minimize scarring, accelerate recovery, and enhance overall patient outcomes. An endoscope is a flexible or rigid tube with a light source and a camera, allowing surgeons to visualize the internal structures of the body through small incisions. Endoscopes are commonly used in procedures such as laparoscopy and arthroscopy. Trocars are sharp-pointed instruments used to puncture the abdominal wall, creating access points for other laparoscopic instruments. Cannulas are then inserted through the trocar to maintain access during the procedure. Lasers are used to cut or coagulate tissues. In minimally invasive surgery, laser systems can be employed for procedures in various specialties, including dermatology and urology. Advanced imaging systems provide high-definition, three-dimensional visualization of the surgical field. These systems enhance the surgeon's ability to navigate and manipulate tissues with precision.

Ongoing advancements in medical technology, including robotic-assisted surgery, enhanced imaging, and innovative surgical instruments, drive the adoption of minimally invasive surgical devices. Surgeons and healthcare facilities are keen to incorporate the latest technologies for improved patient outcomes. Growing awareness among patients about the benefits of minimally invasive procedures, including shorter recovery times, reduced scarring, and less postoperative pain, influences the demand for these surgeries. Patient preferences can drive the adoption of minimally invasive surgical devices. The trend toward outpatient or ambulatory surgeries is on the rise. Minimally invasive procedures are well-suited for outpatient settings as they often require shorter hospital stays, contributing to the overall market growth. Minimally invasive procedures are associated with lower rates of complications, reduced infection risks, and positive patient outcomes. The focus on patient safety and improved surgical outcomes encourages the adoption of minimally invasive surgical devices.

## Key Market Drivers

### Technological Advancements

da Vinci Surgical System is a robotic surgical system that allows surgeons to perform minimally invasive procedures with enhanced precision and control. The system translates the surgeon's hand movements into smaller, more precise movements of tiny instruments inside the patient's body. High-resolution imaging technologies, such as fluoroscopy and endoscopy, provide real-time visualization during minimally invasive surgeries. These imaging systems enable surgeons to navigate and manipulate instruments with greater accuracy. Miniaturized surgical instruments with improved

dexterity and maneuverability allow surgeons to perform intricate procedures through small incisions. These instruments are designed to minimize tissue damage and enhance surgical outcomes. Electrosurgical devices now incorporate advanced energy sources, such as radiofrequency and ultrasonic energy, for cutting and coagulation. These devices enable precise tissue dissection while minimizing thermal damage to surrounding tissues.

3D printing technology is utilized to create customized surgical tools and implants tailored to individual patient anatomy. This technology enhances the efficiency and effectiveness of minimally invasive procedures. Surgical instruments equipped with sensors and feedback mechanisms provide real-time information to surgeons. This allows for better control and monitoring during procedures, improving overall surgical outcomes. Advances in single-incision laparoscopic surgery (SILS) involve the use of specialized access devices that allow multiple instruments to be inserted through a single incision. This reduces the number of incisions and potentially minimizes scarring.

Capsule endoscopy involves the use of a small, ingestible capsule with a camera to visualize the digestive tract. This technology eliminates the need for traditional endoscopes and provides a non-invasive means of examining the gastrointestinal system. Telepresence technology enables expert surgeons to remotely guide and assist in surgeries. This is particularly beneficial in regions with limited access to specialized medical expertise. Improvements in haptic feedback technology allow surgeons to feel tactile sensations while using robotic-assisted systems. This enhances the surgeon's sense of touch, crucial for delicate procedures. AI algorithms are being developed to assist surgeons in planning and executing procedures. This includes image analysis, surgical navigation, and predictive modeling for better decision-making. This factor will help in the development of the UAE Minimally Invasive Surgical Devices Market.

### Increasing Patient Awareness

Patients are increasingly aware that minimally invasive procedures typically result in smaller incisions, leading to reduced scarring and improved cosmetic outcomes. Patients are informed about the quicker recovery times associated with minimally invasive surgeries compared to traditional open procedures. This knowledge influences their preference for these procedures. Patients have access to a wealth of information through online platforms, medical websites, and educational resources. This enables them to learn about different treatment options, including the benefits of minimally invasive procedures. Online forums and support groups provide platforms for patients to share their experiences with various surgical procedures. Positive experiences with

minimally invasive surgeries can encourage others to consider these options.

Public health campaigns and media coverage often highlight the advantages of minimally invasive procedures. This exposure increases awareness and may prompt patients to inquire about these options during consultations with healthcare providers. Patients who are well-informed about minimally invasive options can engage in more informed discussions with their healthcare providers. This collaborative decision-making process contributes to the demand for minimally invasive surgical devices. Informed patients often prioritize procedures that offer a better quality of life post-surgery. Minimally invasive surgeries are perceived as less disruptive to daily activities, leading to a preference for these procedures. Patients who are aware of the risks and benefits associated with different surgical approaches are more likely to provide informed consent for minimally invasive procedures. This understanding contributes to the overall demand.

Positive experiences shared by patients who have undergone minimally invasive surgeries can influence others to choose these procedures. Word of mouth plays a crucial role in shaping patient preferences. Shift towards healthcare consumerism empowers patients to actively seek the most suitable treatment options for their conditions. Informed patients are more likely to request minimally invasive alternatives when appropriate. Educational initiatives aimed at improving health literacy contribute to patient awareness. Programs that focus on explaining different surgical options and their benefits can positively impact the demand for minimally invasive surgical devices. Public awareness campaigns focused on specific medical conditions and the available treatment options, including minimally invasive approaches, can drive patient awareness and demand. This factor will pace up the demand of the UAE Minimally Invasive Surgical Devices Market.

### Rising Demand for Outpatient Procedures

Outpatient procedures, which are often minimally invasive, generally offer faster recovery times compared to traditional open surgeries. Patients can return to their normal activities sooner, making these procedures attractive. Minimally invasive surgeries, conducive to outpatient settings, often require shorter hospital stays or can be performed without overnight hospitalization. This aligns with the trend of reducing healthcare costs and utilizing healthcare resources more efficiently. Outpatient procedures are generally more cost-effective for both patients and healthcare providers. Minimally invasive techniques contribute to this cost-effectiveness by minimizing the need for prolonged hospitalization and reducing postoperative care expenses. Patients

prefer the convenience of outpatient procedures, allowing them to undergo surgery without the need for extended hospital stays. Minimally invasive surgeries facilitate this convenience, contributing to patient satisfaction.

Technological advancements in anesthesia and pain management have made it safer and more feasible for patients to undergo minimally invasive procedures in outpatient settings. This has expanded the range of surgeries that can be performed outside of traditional hospital environments. Minimally invasive surgical devices have evolved, allowing for a broader range of procedures to be performed in outpatient settings. Innovations in device technology contribute to the feasibility and safety of outpatient surgeries. Evolving healthcare models, including a focus on value-based care and patient-centered approaches, have encouraged the shift towards outpatient procedures. Minimally invasive techniques align with these models by offering efficient and patient-friendly solutions. Many minimally invasive procedures are employed for preventive and diagnostic purposes. As healthcare trends move towards early detection and intervention, the demand for outpatient minimally invasive procedures for screenings and diagnostics is likely to rise.

The availability of advanced medical technologies, including minimally invasive surgical devices, in outpatient facilities has increased. This accessibility enhances the feasibility of performing a variety of procedures in outpatient settings. Patients increasingly express a preference for outpatient procedures due to the perception of a more comfortable and less institutionalized environment. Minimally invasive surgeries support these preferences by enabling outpatient options. Outpatient settings are often associated with lower infection risks compared to inpatient facilities. Minimally invasive procedures, with their smaller incisions, contribute to reducing the risk of postoperative infections, making outpatient surgeries safer. Outpatient procedures contribute to the efficient use of healthcare resources by reducing the demand for inpatient beds and resources. Minimally invasive techniques are conducive to this efficiency. This factor will accelerate the demand of the UAE Minimally Invasive Surgical Devices Market.

## Key Market Challenges

## Competition and Innovation

The presence of numerous manufacturers and suppliers in the market intensifies competition. Companies must differentiate themselves and their products to gain a competitive edge. Intense competition can lead to price wars, impacting profit margins for companies. Maintaining competitive pricing while ensuring product quality and

innovation becomes a balancing act. The demand for innovation places pressure on companies to invest in research and development continuously. Staying at the forefront of technological advancements is essential to meet market expectations. The pace of innovation in the medical device industry is rapid. Companies need to navigate short product development cycles to introduce new, advanced devices and maintain competitiveness. Introducing innovative products often involves navigating complex regulatory processes. Companies must ensure that their innovations comply with local and international regulatory standards, which can be challenging and time-consuming. Meeting regulatory requirements can incur significant costs. Smaller companies may face challenges in managing these costs, impacting their ability to compete with larger, more established players. Companies investing in research and development must protect their intellectual property. Navigating the legal landscape for patents and ensuring the protection of innovations can be challenging but is crucial for maintaining a competitive advantage. Companies need to differentiate their products to stand out in a crowded market. Establishing a unique value proposition that goes beyond pricing is essential for success. Creating brand awareness and recognition is a challenge, especially for newer market entrants. Building trust in the quality and reliability of minimally invasive surgical devices is vital for market success.

## Training and Skill Development

Minimally invasive surgical devices often involve complex technologies, such as robotic-assisted systems. Training healthcare professionals to effectively use these technologies requires specialized knowledge and skills. Continuous advancements in technology necessitate ongoing training to keep healthcare professionals abreast of the latest developments. Ensuring access to continuous learning opportunities can be a logistical challenge. Adequate facilities for hands-on training in minimally invasive surgical techniques may be limited. Establishing and maintaining training centers with the necessary infrastructure can be challenging. Training often involves simulation tools to provide a realistic environment for practicing surgical procedures. Ensuring widespread access to high-quality simulation tools can be a logistical and financial challenge. Healthcare professionals, particularly surgeons, often face heavy workloads. Balancing clinical responsibilities with the time required for training and skill development can be a significant challenge. Structuring training programs within the constraints of physicians' busy schedules can be challenging. Flexible training options and efficient programs are essential to accommodate physicians' time limitations. Surgeons accustomed to traditional open surgeries may face a learning curve when transitioning to minimally invasive techniques. Effective training programs need to address this transition and provide adequate support. For technologies like robotic-

assisted surgery, overcoming the learning curve and ensuring seamless integration into surgical practices require comprehensive training programs.

## Key Market Trends

### Increasing Surgical Procedures

The introduction and increasing adoption of robotic-assisted surgical systems, such as the da Vinci Surgical System, have enabled more precise and intricate procedures. Surgeons are incorporating these robotic systems into their practices, leading to a surge in minimally invasive surgeries. The growing trend toward outpatient and ambulatory surgeries favors minimally invasive techniques, as they are well-suited for procedures that allow patients to return home on the same day. This trend contributes to the overall increase in surgical procedures. Continuous research and clinical advancements are expanding the indications for minimally invasive procedures. As more conditions become treatable using these techniques, the overall volume of minimally invasive surgeries is on the rise. Minimally invasive procedures are often perceived as cost-effective due to shorter hospital stays, reduced postoperative complications, and faster recovery. Efforts to optimize healthcare costs contribute to the preference for minimally invasive surgical options. Patients, driven by a desire for less invasive treatment options, are increasingly expressing preferences for minimally invasive procedures. This preference aligns with the global trend toward patient-centered care and a focus on improving the overall patient experience.

## Segmental Insights

### Type Insights

In 2022, the UAE Minimally Invasive Surgical Devices Market largest share was held by Electrosurgical Devices segment and is predicted to continue expanding over the coming years. Electrosurgical devices are versatile tools that can be used in various surgical procedures across different medical specialties. Their adaptability makes them a widely used component in minimally invasive surgeries, contributing to the segment's dominance. Electrosurgical devices offer surgeons a high level of precision and control during procedures. This is particularly important in minimally invasive surgeries where precision is crucial due to limited access and visibility. Surgeons can use these devices to cut, coagulate, and vaporize tissues with accuracy. Electrosurgical devices play a significant role in achieving hemostasis (control of bleeding) during surgeries. This capability is essential in minimally invasive procedures to minimize blood loss, enhance

visibility, and ensure the safety of the patient. The use of electrosurgical devices often results in minimized tissue trauma and scarring. This aligns with the objectives of minimally invasive surgery, which aims to reduce the physical impact on the patient, promote faster recovery, and improve cosmetic outcomes. Ongoing advancements in electrosurgical technology, including the development of sophisticated devices with enhanced features, contribute to their widespread adoption. Surgeons are more likely to Favor devices that offer the latest technological capabilities for improved patient outcomes.

### Surgery Type Insights

In 2022, the UAE Minimally Invasive Surgical Devices Market largest share was held by Urology segment and is predicted to continue expanding over the coming years. The incidence of urological conditions, such as kidney stones, prostate issues, and urinary tract disorders, is relatively high. Minimally invasive surgical devices are frequently utilized in urological procedures due to their precision and effectiveness in treating these conditions. The field of urology has seen significant advancements in minimally invasive techniques, including robotic-assisted surgeries and endoscopic procedures. The adoption of these technologies contributes to the dominance of the Urology segment in the market. Patients often prefer minimally invasive procedures in urology due to the associated benefits, including shorter recovery times, reduced postoperative pain, and smaller incisions. This preference drives the demand for minimally invasive surgical devices in the urological segment. Higher awareness among both healthcare providers and patients about the advantages of minimally invasive urological procedures can lead to greater adoption. Educational programs and training initiatives that focus on the benefits of these devices may contribute to their prevalence in urology. The aging population often experiences an increased incidence of urological conditions. As the population ages, the demand for urological interventions, including those using minimally invasive devices, is likely to rise.

### End-User Insights

In 2022, the UAE Minimally Invasive Surgical Devices Market largest share was held by Hospitals & Specialty Clinics segment in the forecast period and is predicted to continue expanding over the coming years. Hospitals and specialty clinics often offer a comprehensive range of medical services, including specialized surgical procedures. Minimally invasive surgeries are frequently conducted in these settings due to the availability of advanced equipment, specialized surgical teams, and support staff. Hospitals, especially larger medical facilities, tend to have advanced infrastructure and

state-of-the-art operating rooms equipped for minimally invasive surgeries. The investment in cutting-edge technology is often higher in hospital settings, allowing for a broader adoption of minimally invasive surgical devices. Hospitals typically house multidisciplinary teams of surgeons, anesthesiologists, and other healthcare professionals. This collaborative environment supports the integration of minimally invasive techniques across various medical specialties, contributing to a larger share in the market. Hospitals often accommodate both inpatient and outpatient surgical procedures. Minimally invasive surgeries, with their benefits of shorter recovery times, reduced hospital stays, and less postoperative pain, align well with the trend toward outpatient or ambulatory procedures, contributing to the segment's prominence. Hospitals, especially those with specialized clinics, tend to have extensive referral networks. Patients with complex medical conditions or in need of specialized surgeries are often referred to hospital settings, enhancing the utilization of minimally invasive surgical devices.

## Regional Insights

The Abu Dhabi region dominates the UAE Minimally Invasive Surgical Devices Market in 2022. Abu Dhabi is known for its advanced healthcare infrastructure, including state-of-the-art hospitals and medical facilities. The presence of modern healthcare facilities is crucial for the adoption of minimally invasive surgical procedures and the use of related devices. As the capital and one of the wealthiest emirates in the UAE, Abu Dhabi may have the financial capacity to invest in cutting-edge medical technologies. This economic strength allows healthcare facilities in the region to acquire and implement the latest minimally invasive surgical devices. Abu Dhabi has been actively promoting medical tourism, attracting patients from the region and around the world. The demand for high-quality healthcare services, including advanced surgical procedures, could drive the prevalence of minimally invasive techniques and associated devices. The government of Abu Dhabi may have implemented specific initiatives and policies to encourage the adoption of advanced medical technologies. Incentives and support from the government can significantly impact the growth of the minimally invasive surgical devices market. The presence of reputable medical research and educational institutions in Abu Dhabi contributes to a pool of skilled healthcare professionals. Ongoing research and education in minimally invasive surgical techniques can foster the integration of innovative devices into medical practices.

## Key Market Players

Medtronic Meta FZ-LLC

Stryker ESCS BV

Johnson & Johnson UAE

Karl Storz UAE

Fujifilm Middle East FZE

Report Scope:

In this report, the UAE Minimally Invasive Surgical Devices Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Minimally Invasive Surgical Devices Market, By Type:

Handheld Instruments

Surgical Scopes

Cutting Instruments

Guiding Devices

Electrosurgical Devices

Minimally Invasive Surgical Devices Market, By Surgery Type:

Gastrointestinal

Gynecology

Urology

Cardiovascular

Others

Minimally Invasive Surgical Devices Market, By End-User:

Hospitals & Specialty Clinics

Ambulatory Care Centers

Others

Minimally Invasive Surgical Devices Market, By region:

Dubai

Abu Dhabi

Sharjah

Rest of UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the UAE Minimally Invasive Surgical Devices Market.

Available Customizations:

UAE Minimally Invasive Surgical Devices Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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