

# Advances in Minimally Invasive Surgery

## Total Laparoscopic Solutions

### Solutions

IDEAL EYES™ Rigid Laparoscopes

IDEAL EYES™ HD Articulating Laparoscope

PneumoSure™

MiniLap Instruments

Laparoscopic Instruments

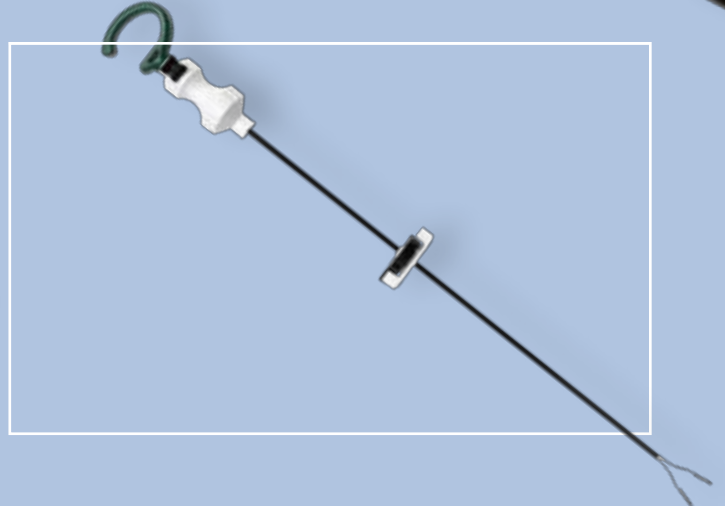
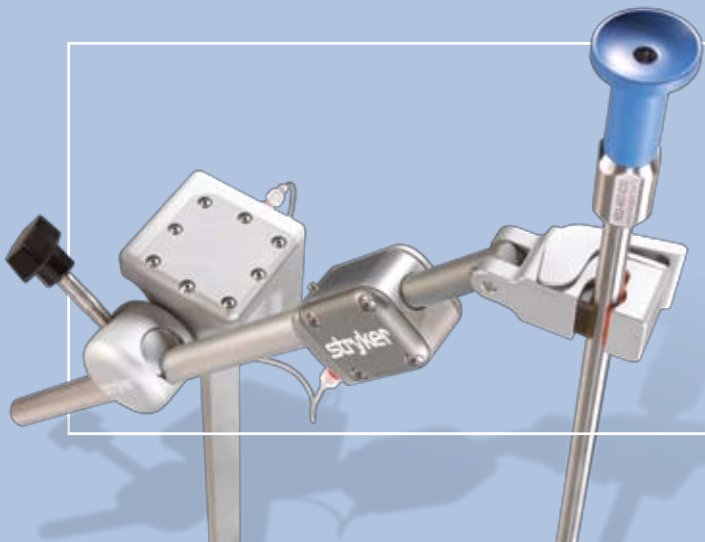
StrykeFlow™ 2

AHTO™

Plume-Away™

InfraVision™

Pediatric | Bariatric Offering



# Seeing surgery through new eyes... IDEAL EYES™



## The Way Surgery Was Meant to be Seen

See why Stryker is the visualization leader in high definition imaging with improved detail recognition, resolution, and excellent durability with the newest generation of IDEAL EYES™ laparoscopes. Designed to enhance picture quality, IDEAL EYES™ laparoscopes can optimally support resolution capabilities the market's latest high definition camera systems are able to provide.

## Take A Better Look

Adjusted optical calculations, new state of the art glass lenses, and an improved patented lens design allow for Stryker's IDEAL EYES™ laparoscopes to give better image contrast and color reproduction. When paired with the 1288 HD 3-Chip® Camera, the IDEAL EYES™ laparoscopes can provide improved visualization in the OR.

## Set Your Sights High

In addition to excellent optical performance, Stryker IDEAL EYES™ laparoscopes combine high quality sapphires and laser welded leakage paths to ensure durability that will withstand repeated autoclave cycles over time.



## Scope Warmer: A Warm Goodbye to Fog

Stryker's Scope Warmer is a disposable, sterile packaged, self-contained heating device that pre-warms endoscopes to body temperature, overcoming the temperature difference that creates condensation on the endoscope lens.

**Stryker's Scope Warmer is activated without the need for electrical connections or messy saline solutions.**

- » Disposable, sterile packaged heating device
- » Warms several endoscopes at a time
- » Foam insert protects the endoscope

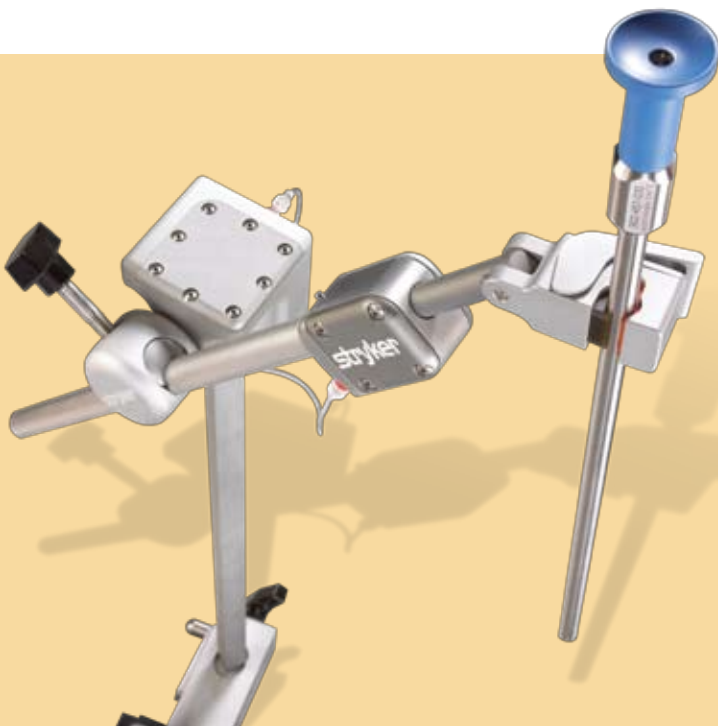
## IDEAL EYES

- » Enhanced center-to-edge resolution
- » Improved depth of field
- » Reduced image distortion



### IDEAL EYES™ Laparoscope Offerings

- » 5mm
- » 10mm
- » 5mm Bariatric
- » 10mm Bariatric
- » 2.9mm Pediatric



### Wingman®

Wingman® is a pneumatic scope-holding system designed to hold any 5mm or 10mm endoscope and camera.

#### Extremely effective and easy to use, Wingman® volunteers an extra hand in the operating room.

- » Provides a stable image
- » Decreases surgeon fatigue
- » Frees staff to focus on critical operating room tasks

# IDEAL EYES™ HD Articulating Laparoscope

## Take A Look Around

### Freedom of Flexibility

The IDEAL EYES™ HD Articulating Laparoscope includes distal flex tip technology to allow for 100 degrees of flexion in all directions. It transmits both HD (1280x1024) and HDTV (720p) video signals for optimal viewing in all areas of surgery. The laparoscope control unit (LCU) gives users the capability to toggle between rigid and flexible tip camera images with the push of a button, adding efficiency within the OR.

### Take Control

The friction lock design makes tip maneuverability simple and easy. To help condense the amount of clutter in the sterile field attributed to connection cables, the IDEAL EYES™ HD Articulating Laparoscope features a single cable design, allowing both light and the video signal from the operative site to the control unit in a single casing. The ergonomic hand piece includes two separated buttons giving users the ability to take pictures, record video, white balance and increase or decrease light from the surgical field.



### Features & Benefits

- » 10mm HD (1280x1024 and 720p)
- » Friction assist brake (no locking mechanism necessary)
- » Robust bending section
- » Large depth of field
- » Integrated light cable
- » More than 100° of flexion in all directions
- » Ergonomic handle and lever control
- » Toggle switch between flexible tip and rigid camera

# PneumoSure®

## High Flow Insufflator

### Market Leading Technology

Stryker's 45L PneumoSure® provides unparalleled performance, real time pressure sensing and multiple user modes. With its new integrated tube design, the PneumoSure® manages optimal pressure and flow rates to achieve greater accuracy during procedures. The 45L insufflator is designed to handle a wide variety of cases including pediatrics, bariatrics, and vessel harvesting. Its ability to safely maintain pneumoperitoneum in a range of conditions brings insufflation in the OR to a new level.

- » Multiple user modes
- » Increased accuracy
- » Real time pressure sensing
- » Interactive user interface
- » Software upgradeable

### High Flow Tubing

- » Increased flow
- » Integrated filter
- » Ideal for laparoscopic cases

### High Flow with RTP

- » Increased accuracy
- » Increased flow
- » Ideal for advanced laparoscopic cases

### Heated Tubing with RTP

- » Heated CO<sub>2</sub>
- » Maintains higher flow rates
- » Increased accuracy



### Quick & Easy Navigation Touchscreen Interface

The PneumoSure's® intuitive touchscreen ensures quick and easy navigation through the user menu. The redesigned full color interface was specially designed for surgeons and staff.

- » Higher actual flow rate
- » Full color touch panel allows for better viewing angles
- » SIDNE® compatibility allows surgeons to control the insufflator
- » Change modes with the touch of a button



# MiniLap

## Precision With No Incision

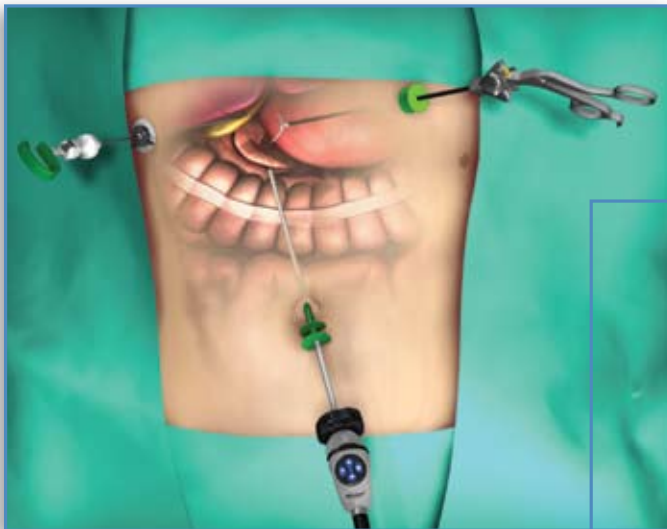
### The Evolution of MINImally Invasive Surgery

Stryker is the first to market with its new one-of-a-kind ultra minimally invasive instrument line, MiniLap. These instruments allow for access and instrumentation in one precision-crafted laparoscopic device.

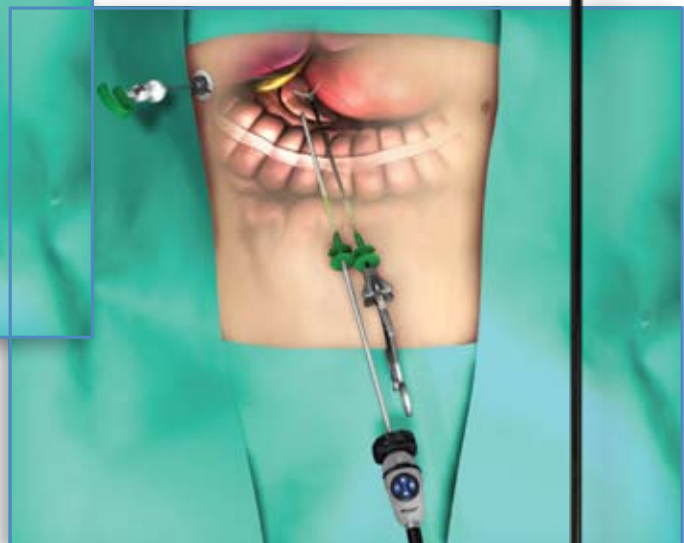
Designed with percutaneous capabilities, MiniLap instruments are 2.3mm in diameter and offer both surgeon and patient benefits. The access insertion needle allows for time-saving entry into the abdominal cavity and also eliminates surgical incision closure at the end of each procedure.

MiniLap's ultra slim design and incisionless entry capabilities can help reduce patient scarring.

The stainless steel instrumentation tip and stabilizing pivot disk provide maximum strength to secure, retract, and manipulate human tissue and organs. Available in multiple tip styles, MiniLap instruments can be used for percutaneous access in a wide variety of laparoscopic procedures.



**Standard Laparoscopic Cholecystectomy**  
Three-Port Technique



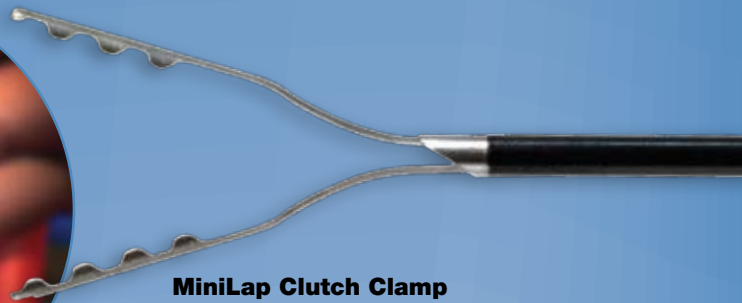
**Laparoscopic Cholecystectomy**  
Single Incision





**MiniLap Alligator Clamp**

This grasper features aggressive jaws that are designed to grab and retract tissue such as the gallbladder, muscle or fascia or specimen tissue.

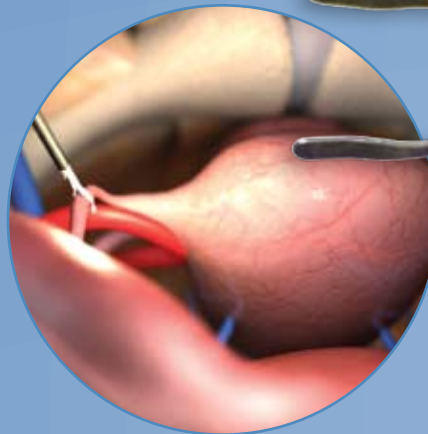


**MiniLap Clutch Clamp**

This minimally traumatic device has a set of softened interlocking tines that can help to grasp and retract tissue such as a stomach, esophagus, duodenum, appendix or ovary.

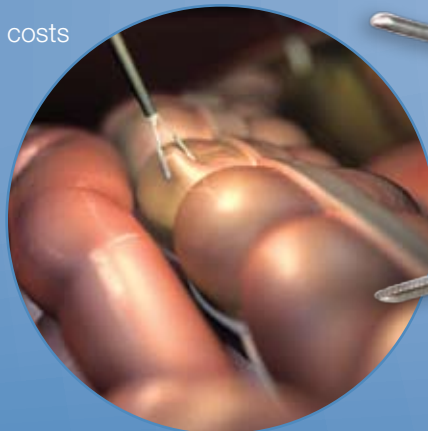
**Features & Benefits**

- » Unique tip closure design to prevent damage of tissue
- » Access and instrumentation in one
- » No surgical incision closure necessary
- » Reduces scarring
- » Entry-depth control through retention and pivot disc
- » Ease of use
- » Retention of abdominal pressure
- » Available in a number of commonly used device tip configurations
- » Self-sealing without compromising insufflation pressure
- » No reprocessing or capital costs



**MiniLap Babcock Clamp**

This atraumatic device is designed to secure and retract vascular or infundibular structures.



**MiniLap Bowel Clamp**

This grasper is an atraumatic device with slight serrations to grasp and retract sensitive tissue such as the bowel or bladder.



# Laparoscopic Instruments

## Sliding Lock Graspers

### Features & Benefits

- » High quality medical grade stainless steel handles
- » Special & precise ratchet locking mechanism
- » Coated shaft using 0.5mm thick Radel tubing to enhance longevity and durability
- » Atraumatic single & double action jaws for optimum gripping of tissue
- » Offered in both rotating and non-rotating styles



### Park Trainer™ Laparoscopic System: The Ultimate Laparoscopic Training Tool

- » Easy to move
- » Adjustable platform height
- » Easy monitoring position
- » Adjustable training module
- » Sliding cabinet with lock
- » Ability to set up for wet and dry labs
- » Side rails for anchoring scope arm and other accessories



# Laparoscopic Instruments

## Reliability for all Laparoscopic Procedures



### Reliable Solutions for Pediatric, Bariatric, and General Laparoscopic Procedures

Stryker Endoscopy's laparoscopic instruments are manufactured out of high quality stainless steel in conjunction with the most durable modern materials. Each instrument is created using the latest in computer controlled machine technology and perfected by the highest standards of master hand craftsmanship.

**PEEK Monopolar Handle**



**PEEK Multifunction Handle**



**Monopolar Handle**



**Ratcheting Handle**



### Features & Benefits

#### Durability

- » Patient safety
- » Longer instrument life
- » Reduced maintenance cost

#### 360° Shaft Rotation

- » One finger control of the instrument
- » Variable resistance based on pressure
- » Handle design facilities
- » Better dexterity
- » Decreased finger fatigue due to larger finger rings

#### Modular Instrument Design

- » Customization of instrumentation for each user
- » Easy disassembly for cleaning and maintenance

# Spike & Go with StrykeFlow™ 2

## Spike & Go with StrykeFlow™ 2

Experience the benefits of optimal suction irrigation performance. This completely disposable battery powered suction irrigator includes a small, powerful pump that spikes directly into the bag and achieves exceptional flow rates. Hassle free set-up equates to decreased OR preparation and turnover time. Add ease and simplicity to any laparoscopic procedure with StrykeFlow™ 2.



## Features & Benefits

- » Direct spike into bag for easy setup
- » Ergonomic handpiece for ambidextrous grip and comfort
- » Variable suction control valve for smoke evacuation
- » Pop-top battery housing for easy battery removal
- » Compatible with any Stryker suction irrigation tip
- » Tubing comes out of back of handpiece to help prevent clogging

# AHTO™ Irrigation Pump

## AHTO™

The AHTO™ Irrigation Pump is hassle free and extremely reliable for any general surgical case requiring irrigation. This cordless irrigation console is small, lightweight and extremely intuitive. Interactive flow rate and battery level displays establish a user friendly interface with the surgical staff that equates to efficient setup and turnover of the operating room. The simplicity and functionality of the tube set further exemplifies how beneficial this product is to the surgeon, the patient, and the surgical staff.

## Features & Benefits

- » Cordless option alleviates clutter in the OR
- » Self-priming system
- » Displays for flow rate & battery life
- » Instant activation upon insertion of cassette tube set
- » Simple installation reduces setup time
- » Maximum flow rate of 4 L/min
- » Up and down toggle buttons for flow control
- » Toggle button with battery icon to indicate battery level
- » Extended battery life



## Plume-Away™

The Plume-Away 4.0™ and Ultra Plume-Away 6.0™ are patented smoke removal systems that provide continuous, automatic removal of harmful surgical smoke produced by electrocautery, laser or ultrasonic devices during laparoscopic procedures. These systems ensure that plume is removed quickly, keeping the surgeon's field of view clear, while the surgical plume is decontaminated and deodorized for staff safety.



## Ultra Plume-Away 4.0™

- » Increased evacuation of plume, up to 4 L/min
- » Reduces need to remove scope for intra-operative cleaning
- » Easy to install on a trocar's side port
- » Diminished filter obstruction
- » Very effective with both 10mm and 5mm trocars

## Ultra Plume-Away 6.0™

- » Increased evacuation of plume, up to 6 L/min
- » Best option for 5mm trocar
- » Intended for procedures with a great deal of electrocautery and subsequent plume
- » Clears smoke almost instantly
- » No loss of pneumoperitoneum

# Lighting the Way In Surgery



Stryker's 510(k) Cleared  
3-Chip® Camera  
can Detect Infrared Illumination

## InfraVision™ Imaging System

EKIT and UKIT

- » Illuminates through 12mm of tissue
- » Infrared light will not emit heat that could damage tissue
- » The Stryker 3-Chip® Camera is specially designed to allow for the transmission of infrared light
- » Patented blinking mechanism
- » Adjustable brightness control
- » Cutting edge technology ideal for teaching environments



# InfraVision™ Imaging System

## InfraVision™ UKIT

- » Quick and easy identification of the ureters
- » Helps decrease procedure time
- » Safeguard urethral integrity

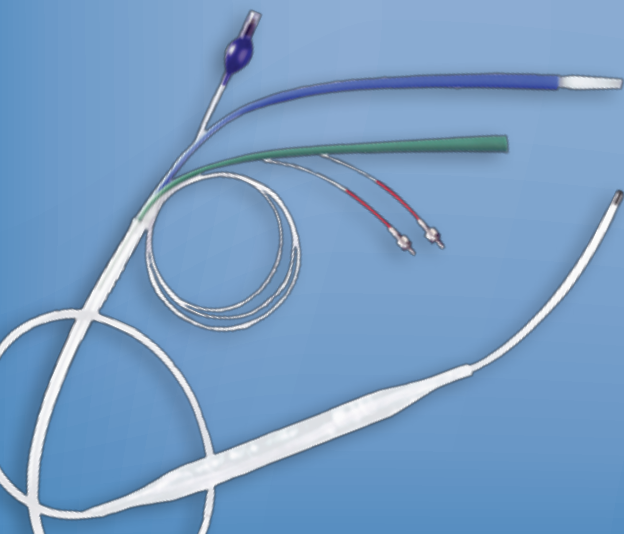
Stryker's Ureteral Kit is an infrared smart tool designed to assist in the fast identification and management of the ureters during laparoscopic procedures. The ureter is transilluminated by emitting fibers that are connected to the patented InfraVision™ Imaging System and are then detected by a Stryker 3-Chip® camera.



## InfraVision™ EKIT

- » Eliminates the need for a bougie
- » Quick, easy identification of the important structures
- » Safer for the patient, reduces risk of an esophageal tear

The Stryker Esophageal Kit eliminates the need for a bougie, making the procedure safer and less traumatic for the patient. The 15cm long balloon inflates with saline to the designated size at the designated location. When connected to the InfraVision™ Illuminator, the emitting fibers emit infrared light that is detected by Stryker's high resolution 3-Chip® camera.



# Comprehensive Pediatric and Bariatric Solutions

Stryker recognizes the importance for the specialization of laparoscopic products for both pediatric and bariatric procedures and has worked to design products that cater to the specific needs each specialty requires.

## Pediatric Offerings

### MiniLap

- » 2.3mm disposable laparoscopic graspers
- » Access and instrumentation in one ultra minimally invasive design
- » Needlescopic entry capabilities
- » No suture closure necessary
- » High strength stainless steel tips to retract, grasp, and manipulate tissue
- » Less invasive technology, ideal for pediatric patients

### 2.9mm IDEAL EYES™ Pediatric Laparoscopes

- » Designed to accommodate small anatomical structures
- » 20cm length
- » Thicker fiber optic cables for enhanced brightness
- » Stryker IDEAL EYES™ optics for optimal resolution and color reproduction

### 3mm Pediatric Laparoscopic Instruments

- » Available in 20cm and 29cm length
- » PEEK Monopolar and Multifunctional handles for grasping, electrocautery, and dissection capabilities
- » Wide variety of available insert graspers, dissectors, scissors, biopsy and needleholders

### PneumoSure® Insufflator with Pediatric Mode

- » 510(k) clearance for pediatric mode
- » Designed specifically for use on newborns, infants, and children
- » Limits the maximum flow rate and pressure to protect against over-pressurization of the abdominal cavity



## Bariatric Offerings

### Bariatric Length IDEAL EYES™ Laparoscopes

- » Available in both 5mm and 10mm diameters
- » Extended length of 45cm, optimal for bariatric procedures and single incision surgery
- » New lenses and fiber cables for improved light transmission
- » IDEAL EYES™ optics for enhanced resolution and less image distortion
- » Improved depth of field to enhance the distance of intraoperative focus inside the abdominal cavity



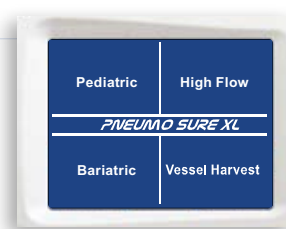
### 5mm Bariatric Length Laparoscopic Instruments

- » 45cm length for bariatric procedures
- » Variety of handle and insert styles for grasping, dissecting, suturing, and cutting capabilities
- » Bariatric length rotating and non-rotating sliding lock graspers for an ergonomic and precise ratcheting mechanism



### PneumoSure® Insufflator XL with Bariatric Mode

- » Specifically designed for rapid insufflation of large volumes for bariatric procedures
- » Bariatric mode allows for a high flow rate of up to 45L/m
- » Real-time pressure sensing to constantly measure pressure within the abdominal cavity and optimize insufflation performance



### Wingman®

- » Stryker's pneumatic scope-holding device
- » Provides a stable image and prevents physician fatigue
- » Ideal for the duration and longevity of bariatric cases
- » Designed to accommodate any 5mm and 10mm laparoscope and camera



### Scope Warmers

- » Disposable, sterile packaged heating device
- » Foam insert protects the endoscope lens and allows for the application of Fog Blocker
- » A perfect compliment to Stryker's bariatric length IDEAL EYES™ laparoscopes



### Plume-Away™

- » Intended for long procedures with a great deal of electrocautery and subsequent plume
- » No loss of pneumoperitoneum



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**Joint Replacements**

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**Trauma, Extremities & Deformities**

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**Cranio-maxillofacial**

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**Spine**

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**Biologics**

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**Surgical Products**

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**Neuro & ENT**

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**Interventional Spine**

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**Navigation**

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**Endoscopy**

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**Communications**

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**Imaging**

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**EMS Equipment**

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San Jose, CA 95138  
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