

# JAPANESE TECHNOLOGY

Akino  
Surgery Simplified  
Japan • Singapore



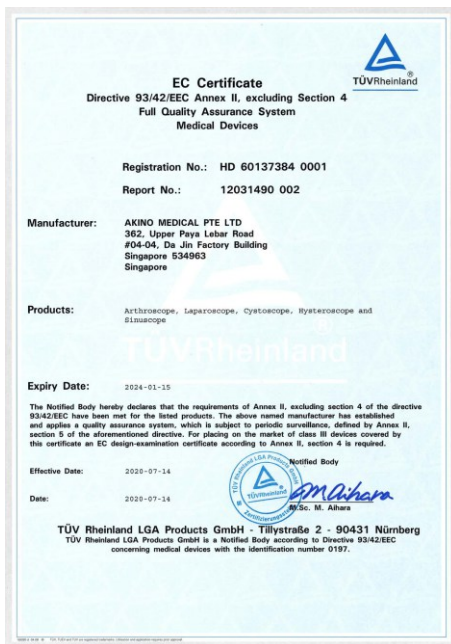
MINIMAL INVASIVE SURGERY



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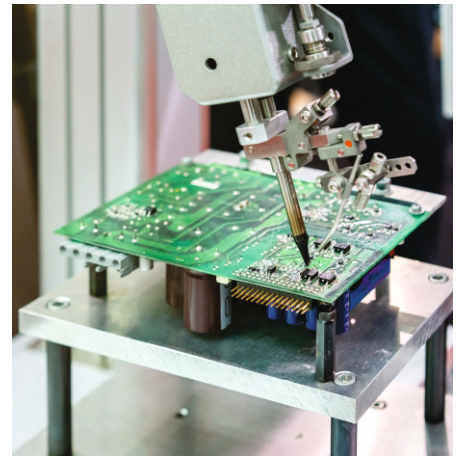
# Akino

## Surgery Simplified



## JAPANESE TECHNOLOGY

Akino Medical Pte Ltd manufactures innovative Endoscopy vision Systems covering all technology platforms right from 2 MP vision to 12 MP 3D cameras to cover requirements of simple to very advanced Endoscopic surgeries.



Akino visualisation systems are designed in Japan. Critical electronic boards are made in Japan & finally assembled in its Singapore factory. Singapore is strategically chosen as factory location due to its proximity to Asia pacific, Middle East and European markets. Akino strengths lie in developing latest vision systems that uses Integrated CMOS platform, more advanced than older generation CMOS.



## INTEGRATED CMOS

AKINO CAMERAS ARE BASED ON INTEGRATED CMOS PLATFORM THAT HAS IMPROVED LAST GENERATION CMOS TECHNOLOGY THROUGH ALGORITHMS & SOFTWARES DEVELOPED IN ITS OWN R & D DEPARTMENT

## Camera Erato 3 - 6 MP with Recording

Optical  
Zoom Knob

- 4 Buttons - 8 Functions
- Video Recording On / Off
- Still Image Capture



**6MP INTEGRATED  
CMOS PLATFORM** +

**BUILT IN FULL HD RECORDING** +

**DUAL VIMAGE MODE** +

**OPTICAL ZOOM** +

**ETHERNET OUTPUT** +

### FEATURES

- + 6MP - 1920x1080 pixels on Integrated CMOS, full HD native resolution
- + Dual Vimage mode for malignant tissue detection
- + Hi Res mode for ultimate clarity
- + Built in full HD Recording with quality same as live surgery
- + Digital & optical zoom as standard option. Surgeons will not lose the field now
- + Ethernet output for transmitting recorded images on your server
- + 8 Surgery selection modes, ideal in multispeciality hospitals. No need to adjust internal settings
- + 4 buttons on camera head for 8 functions - Surgery selection, Digital Zoom, Vimage mode selection, Hi Res ON/OFF, Recording ON/OFF & Still image capture
- + Menu to change image parameters such as brightness, colours, enhancements etc. This helps surgeon to fine tune image as per his personal choice.
- + Adaptability to 2MP camera head
- + Outputs DVI-Dx2, 3G - SDIx2 ( 1080p). Easy to connect to satellite monitors, pendants, to server room & auditorium

### SPECIFICATIONS

- + 1/3" CMOS Sensor, 6MP
- + Control - Capacitive Touch Buttons
- + C - Mount Coupler - 15-35mm zoom
- + Camera Cable- 3mtr length
- + Output- 3G-SDI (2lines): 0.8Vp-p / 75 W, 1920x1080p  
DVI (2lines) - 1920 x 1080p, 59.94/50Hz  
RJ45 LAN connectivity
- + Software update - RS 232
- + Dimensions / Weight -  
CCU: W312 x H122 x D400mm / 4Kg or less  
6MP Head with Zoom coupler - 220gm
- + Protection Class : IP 1
- + Medical Product Class : I
- + Applied Standard : IEC 60601 - 1
- + Certification : CE

### Operating Conditions

- + Relative Humidity : <90% non condensing
- + Operating temperature : +10° to 35°C
- + Voltage & Frequency : 230V AC/50Hz

<b>Art No. -</b>	<b>- Erato 3 CCU - 2D3C.60HD</b>
	<b>- Erato 3 Head - 2D3H.60HD</b>
<b>Accessories</b>	<b>- Mains cable, DVI-D cable, User manual</b>



## Camera Erato 2 - 2 MP with Recording



Model Erato 1 - without recording



**2 MP INTEGRATED CMOS +**

**BUILT IN HD RECORDING +**

**SINGLE VIMAGE MODE +**

**DIGITAL ZOOM +**

## FEATURES

- + Integrated CMOS platform
- + 2 MP - 1920 x 1080 pixels on CMOS, Full HD native resolution
- + Single Vimage mode for malignant tissue detection
- + Hi Res mode for ultimate clarity
- + Built in full HD recording - 1080p
- + 8 Surgery Selection modes
- + 4 buttons on camera head for 8 functions - Surgery selection, Digital Zoom, Vimage ON/OFF, Hi Res ON/OFF, Video recording and Still image capture
- + Menu to change image parameters such as brightness, colours, enhancements etc. This helps surgeon to fine tune image as per his personal choice.
- + Outputs DVI-Dx2, HD - SDIx2 . Easy to connect to satellite monitors, pendants, to server room & auditorium

<b>Art No.</b>	<b>- Erato 2 CCU - 2D2C.20 HD</b>
	<b>- Erato 2 Head - 2D1H.20 HD</b>
<b>Accessories</b>	<b>- Mains Cable, DVI - D Cable, User Manual</b>

<b>Art No.</b>	<b>- Erato 1 CCU - 2D1C.20 HD</b>
	<b>- Erato 1 Head - 2D1H.20 HD</b>

## SPECIFICATIONS

- + 1/3" CMOS Sensor, 2 MP
- + Control - Capacitive Touch Buttons
- + C-Mount Coupler - 17/24 mm
- + Camera Cable - 3 mtr length
- + Output
  - 3G-SDI (2 Lines): 0.8 VP-P/75 W, 1920x1080p
  - DVI (2 Lines): 1920x1080P.59.94/50Hz
- + Power
  - 100 - 240 VAC, 0.5 A
- + Software update - RS 232
- + Dimension / Weight
  - CCU: W312 x H x 122 x D 400 mm / 4 Kg or less
  - 2 MP Head with Std. Coupler - 190 gm
- + Protection Class : IP 1
- + Medical Product Class : I
- + Applied Standard : IEC 60601 - 1
- + Certification : CE

## Operating Conditions

- + Relative Humidity : <90% non condensing
- + Operating temperature : +10° to 35°C
- + Voltage & Frequency : 230V AC/50Hz

## Surgical Displays - FHD & 4K

**HIGH LUMINANCE OF  
900 cd/m<sup>2</sup> +**

**HISE MODE +**

**IPS LED BACKLIT +**



### FEATURES

- + Full HD Surgical displays, IPS, LED back light
- + High luminance of 900 cd/m<sup>2</sup> , twice as bright as conventional medical displays
- + Hyper Image Enhancer for better image in deeper cavities
- + Memorized Still image for comparing with current video
- + Multiple inputs & outputs – DVI-D, 3G- SDI
- + 12 bit signal processing that gives most natural colours & uniform brightness
- + Split screen - Side by side or PIP. You can view 'C' Arm image side by side with Endoscopy image
- + User preset memory & Function key
- + 27" & 32" Monitor with 4k resolution and optical bonding glass
- + 32" 4K 3D Monitors also available on request

### SPECIFICATIONS

Size	22"	24"	26"	27" 4K
LCD Type	21.5" Diagonal TFT	24" Diagonal TFT (Active Matrix)	26" Diagonal TFT (Active Matrix)	27" IPS
Resolution (H X V)	1920 x 1080 @ 60Hz	1920 x 1200 @ 60Hz	1920 x 1080 @ 60Hz	3840 x 2160 @ 60Hz
Screen Size	476(H) x 268(V) mm	518(H) x 324(V) mm	576(H) x 324(V) mm	599(H) x 388(V) mm
Viewing Angle	170°(H) / 160°(V)	178°(H) / 178°(V)	178°(H) / 178°(V)	178°(H) / 178°(V)
Input Signal	Video/HDMI/DVI/ VGA/3G/HD/SD-SDI	Video/S-Video/DVI/ HD/SD-SDI/RGB	Video/S-Video/DVI/ HD/SD-SDI/RGB	4K - HDMI (200) 4K - Display Port, 3GSDI
Dimensions (W x H x D)	580 x 440 x 145 mm	584 x 400 x 83 mm	640 x 405 x 84 mm	654 x 411 x 58 mm
Weight	7.13 kg	7.5 kg	8 kg	8 kg
Power Ratings	12VDC, 2.4A	24VDC, 2.2A	24VDC, 3.8A	24VDC, 3.8A
Art. No.	M02D.2150	M02D.2424	M02D.2627	M04K.2727

## LED Light Source - Staro 2



- + **HIGH LUMINANCE**
- + **BRIGHTER THAN 300 WATTS XENON**
- + **TURRET FOR FOC**
- + **SMALL SCOPE MODE**
- + **SPECIAL COOLING MECHANISM DUAL FAN**

## FEATURES

- + **LED light source with Turret for Multi brand cable adaptability**
- + **Intensity higher than 300 watts Xenon** - Higher CRI that gives colors like with Xenon even with LED.
- + **Special cooling mechanism** - Staro 2 has special cooling mechanism so that temperature increase is much lower. This increases the life of LED and maintains CRI (color temperature).
- + **Unique “Small Scope” mode** - When activated, light source automatically adjusts itself for scopes below 5mm for intensity and temperature levels.
- + **LED hrs consumed meter**
- + **Extra Safety features** - “Fan Status” display is provided, it gives indication if fan stops working.  
High temperature “Cut Off” - Actual temperature display.
- + **Standby Button** - It allows to put light source in stand by mode when not in use.
- + **Fiber optic cable with 4.8mm diameter, 300cm length** - Fused bonding of fibers, metal braided for higher life, can withstand higher temperatures beyond 200°C, Autoclavable.

## SPECIFICATIONS

- |                         |                              |
|-------------------------|------------------------------|
| + Control               | : Capacitive touch buttons   |
| + Color Temperature     | : 5600°K equivalent to Xenon |
| + Life                  | : 40000 hrs                  |
| + Intensity display     | : 0 -100%                    |
| + LED Hour meter        | : Digital LCD display        |
| + Status Display        | : Fan, Temperature in °C     |
| + Software update       | : RS232                      |
| + Dimensions(w x h x d) | : 312 x 122 x 414 (mm)       |
| + Weight (Approx)       | : 6 Kg                       |
| + Protection Class      | : IP 1                       |
| + Medical Product Class | : I                          |
| + Applied Standard      | : IEC 60601 - 1              |
| + Certification         | : CE                         |

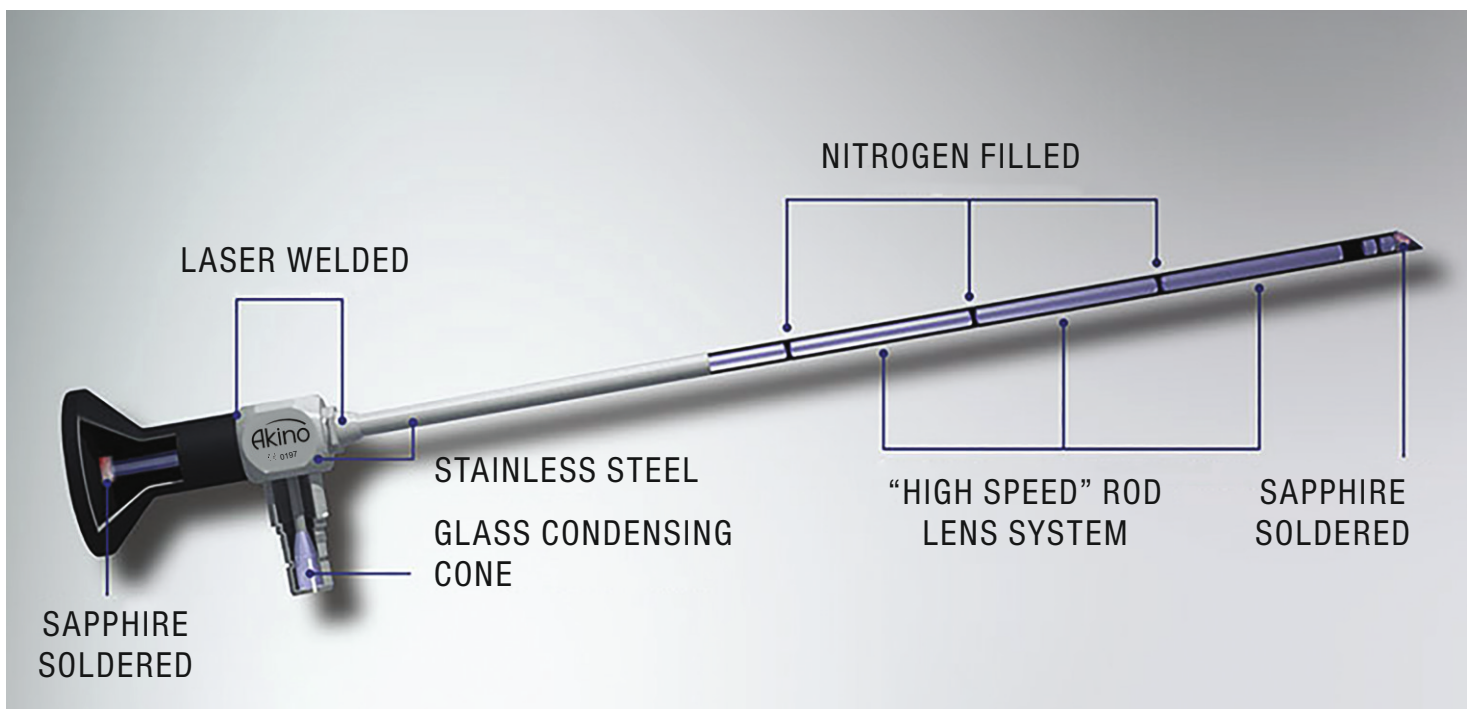
## Operating Conditions

- |                         |                       |
|-------------------------|-----------------------|
| + Relative Humidity     | : <90% non condensing |
| + Operating temperature | : +10° to 35°C        |
| + Voltage and Frequency | : 230V AC / 50 Hz     |

Art. No.	Staro 2 - LEDS.120V Fiber Optic Cable - FR14.3000
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## About Endoscopes



- + **ULTIMATE OPTICAL RESOLUTION HD & UHD**
- + **HIGH LIGHT TRANSMISSION RATIO**
- + **GOOD BRIGHTNESS EVEN IN PERIPHERY**
- + **ACCURATE COLOUR RENDITIONS**

### Patented High Speed Rod Lens

Akino Endoscopes have many unique features that gives excellent optical clarity & longer life of the Endoscope. Thanks to "High speed Rod lens" system, patented design & hence brilliant detailed resolution even at periphery.

### FEATURES

- + Multicoated anti reflective optical system
- + New UHD (4K Ultra High Definition), high resolution optics to give enhanced brightness & clarity
- + Highly refractive glass for Optimum color rendering even when image is magnified
- + As optical and mechanical components are precisely centered, it gives brilliant image which has high contrast image even at periphery
- + High transmission ratio for uniform brightness. Low vignetting i.e. uniform brightness at centre & periphery of the image.
- + Wide viewing angles even in restricted spaces
- + Medical grade Stainless steel tube & body for higher sturdiness
- + Nitrogen filled to avoid internal fogging / condensation in the optical system
- + Laser welded joints to avoid leakage & for longer life
- + Sapphire tips for scratch resistance
- + Glass cone to optimise light input & for longer life of fibers
- + Fully Autoclavable

## Laparoscopes

- ✚ UHD - Ultra high definition (4K) for higher optical clarity, brightness & depth of focus
- ✚ HD - High definition
- ✚ Bariatric length available in 10mm & 5.5mm, HD & UHD

**10 mm**



10 mm Laparoscope	HD Standard Art.No.	UHD Standard Art.No.	HD Bariatric Art.No.	UHD Bariatric Art.No.
0°	2100.3300H	2100.3300U	2100.4500H	2100.4500U
30°	2100.3330H	2100.3330U	2100.4530H	2100.4530U
45°	2100.3345H	2100.3345U	2100.4545H	2100.4545U
WL	330mm	330mm	450mm	450mm

**5.5 mm**



5.5 mm Laparoscope	HD Standard Art.No.	UHD Standard Art.No.	HD Bariatric Art.No.	UHD Bariatric Art.No.
0°	2055.3000H	2055.3000U	2055.4200H	2055.4200U
30°	2055.3030H	2055.3030U	2055.4230H	2055.4230U
45°	2055.3045H	2055.3045U	2055.4245H	2055.4245U
WL	330mm	330mm	450mm	450mm

**2.9 mm**



2.9 mm Laparoscope HD	Art.No.
0°	2029.2000H
30°	2029.2030H
WL	207mm

## Operative Laparoscope

### 11 mm, 90° Eyepiece



11 mm Laparoscope HD	Art. No.
45°	2110.2745S
90°	2110.2790S
Working channel	6.1mm
WL	270 mm
Angle of view	0°

## Sinuscopes HD

### FEATURES

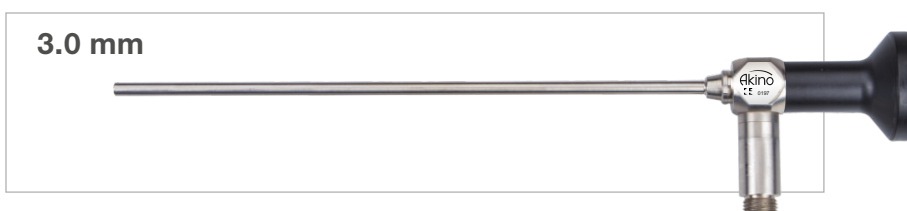
- + Multicoated optical system
- + High Magnification HD optics
- + Wide Angle optics for wider view in restricted space
- + Optimum colour rendering
- + High contrast image even at periphery
- + Laser welded joints for longer life
- + Sapphire tips for scratch resistance
- + Glass cone to optimise light input
- + Nitrogen filled to avoid internal fogging

### 4.0 mm



4 mm Sinuscope	Art.No.
0°	2040.1800H
30°	2040.1830H
45°	2040.1845H
70°	2040.1870H
WL	185mm

### 3.0 mm



3 mm Sinuscope	Art.No.
0°	2030.1500S
30°	2030.1530S
WL	150 mm

## Flexible Nasopharyngoscope

### FEATURES

- + HD Optics in 3.4 mm, diagnostic
- + Sturdy, long life optics
- + Inspection of nasal cavities, the pharynx and larynx
- + Sokable, ETO Sterilizable
- + Supplied with leakage tester
- + Control lever with UP and DOWN direction for angular deflection



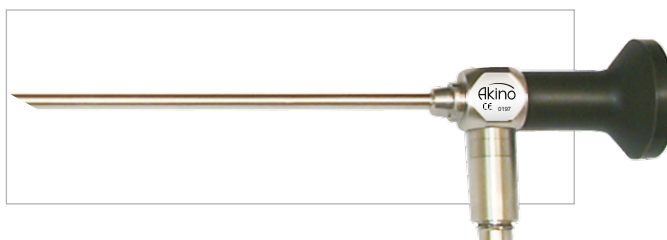
### SPECIFICATIONS

+ Angle of view	: 85°	+ Certification	: CE
+ Outer diameter of the insertion sheath	: 3.4mm	+ Temperature	: 10°C to 55°C
+ Working length	: 300mm	+ Relative humidity	: 5-95%
+ Angular deflection	: 130° up / down	+ Air pressure	: 50 - 106Kpa
+ Protection class	: IP 1		
+ Medical product class	: I		

<b>Flexible Nasopharyngoscope</b>	<b>Art. No.</b>	<b>: 2034.3000 F</b>
<b>Accessories - Pressure tester</b>	<b>Art. No.</b>	<b>: 2D00.NLPT</b>
<b>ETO cap</b>	<b>Art. No.</b>	<b>: 2D00.NLET</b>
<b>Wolf adaptor</b>	<b>Art. No.</b>	<b>: 2D00.NLWA</b>

## Laryngoscope - 6mm, 70°, HD

6 mm Laryngoscope	Art.No.
70°	2060.1670S
WL	160 mm



- |                         |                        |   |
|-------------------------|------------------------|---|
| + 6 mm diameter         | + Working length 160mm | + Panoramic view of larynx                          |
| + Direction of view 70° | + Fully Autoclavable   | + Ideal for stroboscopy due to higher magnification |

## Hysteroscopes / Cystoscopes - 4mm, 2.9mm

4.0 mm



### FEATURES

- + HM HD optics
- + Laser welded joints
- + Sapphire tip for long life
- + High transmission ratio for uniform brightness
- + Medical grade stainless steel tube & body
- + Glass cone for optimised illumination

4 mm Hysteroscope / Cystoscope HD	Art. No.	2.9 mm Hysteroscope / Cystoscope HD	Art. No.
0°	2040.3000H	0°	2029.3000H
12°	2040.3012H	12°	2029.3012H
30°	2040.3030H	30°	2029.3030H
WL	300 mm	WL	300 mm

## Arthroscopes With Sheaths

4 mm Arthroscope HD	Art. No.	2.7 mm Arthroscope HD	Art. No.	1.9 mm Arthroscope HD	Art. No.
0°	2040.1800H	0°	2027.1400S	0°	2019.0600S
30°	2040.1830H	30°	2027.1430S	30°	2019.0630S
70°	2040.1870H	70°	2027.1470S	WL	60 mm
WL	185 mm	WL	140 mm		



## Arthroscopy sheaths, 2 way rotating stopcock with blunt obturator

For 4 mm Arthroscope Colour code Red	Art. No.	For 2.7 mm Arthroscope Colour code White	Art. No.
0°	AT40.1400	0°	AT27.1100
30°	AT40.1430	30°	AT27.1130
70°	AT40.1470	70°	AT27.1170
WL	140 mm	WL	110



## Hysteroscopy Instruments - 4 mm & 2.9 mm

### Diagnostic Sheath For 0° / 30° Hysteroscope

4.0 mm	6.5mm, WL 240mm Art No. DS 40.1000 / OB 40.1001
2.9 mm	5.0mm, WL 240mm Art No. DS 29.1100 / OB 29.1101



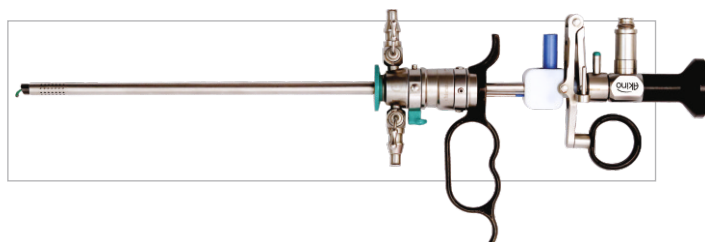
### Tear Drop Operative Sheath For 0° / 30° Hysteroscope

4.0 mm	6.5 mm, WL 192 mm Art No. OS 40.2002
2.9 mm	5.0 mm, WL 192 mm Art No. OS 29.2100



### Tear Drop Operative Sheath For 0° / 30° Hysteroscope

4.0 mm	24 / 26CH (8.6mm) Art No. BR 40.4004 / BR 40.3003
2.9 mm	18.5CH (6.2mm) Art No. BR.29.4100 / BR 29.3100



## Flexible Instruments

### Semi Rigid Forceps / Scissor

#### & Scissors - 5Fr, WL - 410cm

- With Flushing port
- Detachable and cleanable
- Long Life



**Serrated, cup**

Art No. FF05.7001



**Alligator**

Art No. FF05.7002



**Scissor**

Art No. FF05.7003

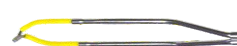
### Bipolar Electrodes

- + Monopolar Electrodes Available on Request



**Roller**

2.9mm Art No. BE 29.5102 /  
4mm Art No. BE 40.5007



**Knife**

2.9mm Art No. BE 29.5101 /  
4mm Art No. BE 40.5006



**Loop**

2.9mm Art No. BE 29.5100 /  
4mm Art No. BE 40.5005

NOTE : Semi Rigid Instrument & Flexible Electrodes are common for 4.00mm & 2.9mm Hysteroscopy





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**AKINO NEAREST REPRESENTATIVE**

