



Analytical Technologies Laparoscopic Surgery Set



Specifications:- **LAPRO 3400 SERIES**

Laparoscope is used for minimally invasive surgery and comprises of telescope and associated instruments and units.

CAMERA CONTROL UNIT & CAMERA

High definition Endoscopic camera system has following features

- a) Pure Digital HD technology with high definition video of 1920 x 1080p (min) native resolution.
- b) Progressive scan technology both on camera head and console
- c) Consistent use of 16:9 format for input and output for HDTV function
- d) CCD chip having hi-fidelity image transmission with digital conversion at camera head itself
- e) The system has digital zoom and/or integrated optical zoom with auto focus to enhance the quality of image size & cross speciality standardization of the camera system, regardless of the telescope used.
- g) System is able to optimize all the settings and is ready as soon as connected to camera control unit with automatic brightness control
- h) Is compatible for remote controlled operation of various features

Technical Specifications :-

- a) Image Sensor: 3 x 1/3 Progressive scan CCD Chip. Aspect ratio- 16:9
- b) Pixels 1920 X 1080 pixels per chip (min)
- c) AGC Microprocessor controlled
- d) Lens F14-32mm \pm 10 %
- e) Video Outputs Composite to BNC, Y/C to S-VHS, RGB to Dsocket, HDTV-DVI-D, DV for recording
- g) Facility to directly record HD (High definition) quality photos and SD (standard definition) quality videos directly through the hub into an USB device.
- h) Camera settings (e.g. white balance, zoom, gain, sharpness etc.) is possible directly from the camera head buttons.
- i) There is communication bus to control all the units.

MONITOR

One Wide Screen Monitor having the following features:

- a) 26" full HD medical grade monitor in 16: 9/10 HDTV format, LED Crystal display,
- b) Resolution: Minimum of 1920 x 1080 pixels
- c) SDI/HD-SDI, Composite, S-Video, RGB, DVI-D and VGA input
- d) All required cables and connectors
- e) TFT screen stand/Fixtures for connecting to Pendant System/Ceiling Light Arm
- f) Dustproof and Drip water protected

TELESCOPES (HD Compatible)

1. 5 mm - 30 degree angle of view 0 degree straight view (each approximately 27-30 cm long)

10 mm - 30 degree angle of view 0 degree straight view (each approximately 30-35 cm long)

Colour coded for identification

Autoclavable

CO2 Electronic INSUFFLATOR

- 1. Fully automatic, electronically controlled gas fill
- 2. Adjustable flow rate of 30-40 litres per minute and pressure range adjustable between 0 to 30 mm



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3. Optical and acoustic warning signals in case of malfunction or excessive pressure with automatic release of over pressure by back flow
4. Selective connection to medical gas pipeline as well as direct connection to high pressure CO2 cylinder is available
5. Control by keys on front panel
6. Clear and adjacent front display of actual and preset flow rate, actual and preset pressure, gas consumed
7. Facility for preheating of gas to body temperature with both internal and external heating device
8. Facility for easy evacuation of smoke and mist
9. Memory for retention of previous pressure settings
10. Include pin-index connection to small/big gas cylinder with regulator, high pressure hose, mains cord, silicone autoclavable tubing set, universal wrench and gas filter

LIGHT SOURCE (Xenon 300) with TWO Spare Bulbs

1. Xenon cold light fountain with 300 watts xenon lamp
2. Colour temperature of at least 5800 °K
3. Manual and automatic adjustment of light intensity
4. Brightness control is regulated manually or automatically via the output signal of a video camera
5. Lamp life 500 hrs or more
6. Display of lamp life/Bulb usage meter warning light
7. Standby mode with emergency lamp with visual indicator
8. Electrical specifications
 - a) Power supply voltage: 100-240 VAC
 - b) Power frequency: 50-60Hz
9. The light source complies with IEC 60601-1, belong to Class II

SUCTION-IRRIGATION UNIT

1. Controlled suction and irrigation unit with flow rate of at least 1l/min.
2. Irrigation pressure control between 0-400 mm Hg, preferably by roller pump.
3. Suction pressure control between 0.75 bar.
4. Control from control panel and/or foot pedal



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5. Main unit with digital display
6. Overflow protection on suction bottles
7. Accessories includes silicone suction tubing set with reusable pressure domes, bacterial filter and suction bottles with cap (minimum 5 ltrs.)

VIDEO-CART

- a. Made of Stainless Steel/Epoxy coated metal with minimum 4 shelves
- b. Portable on 4 antistatic dual castors, 2 with locking brakes
- c. Required number of shelves for housing all the units of the set
- d. Preferable adjustable arm for fixation to either side for fixing the TFT monitor
- e. One drawer unit with lock and key
- f. Cable Manager
- g. Power box with concealed wiring for providing electrical connections of proper rating to all the units suitable for Indian plugs

CARBON DIOXIDE CYLINDER

Two large size cylinders with required regulators and connecting pipe to the insufflator with pressure gauge.

HAND INSTRUMENTS & OTHER ACCESSORIES

Reusable Veress Pneumoperitoneum Needle- Spring loaded blunt stylet Length-10 cm, luer lock

Reusable Trocar :- 5mm- Multifunctional valve, insufflation stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip , length (10.5cm), autoclavable

Reusable Trocar :- 10/11mm- Multifunctional valve, insufflation stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable

Reusable Trocar :- 5mm- Multifunctional valve, insufflation stopcock and threaded sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable

Reusable Trocar :- 13.5mm- Multifunctional valve, insufflation stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavabl

Two ways Suction and Irrigation cannula - -Size 5mm, length 32-38cm, used with suction and irrigation handle and handpiece with stopcock, Size 10 mm, length 32-38 cm

Tissue Grasping forceps – toothed 2x3 teeth- Double action jaws of 20-23 mm , rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchets, autoclavable



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Tissue Grasping forceps – toothed 2x 3 teeth- Single action jaws of size 30-35mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable

Maryland forceps- Double action jaws with size 14-16 mm , rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchet, autoclavable

Grasping forceps- Atraumatic- Double action jaws, spoon shaped with multiple teeth of jaw length 18-23 mm and rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchet, autoclavable

Dissecting and Grasping forceps- Alligator type- Double action jaws , rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable

Dissecting and Grasping forceps- Single action jaw , with dolphin nose tip of 16-20 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchet, autoclavable

Grasping forceps- Atraumatic – Reddick Olsen type- Double action jaws, with fine serrations on jaw length 12-18 mm and rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchet, autoclavable

Grasping forceps- Fenestrated- Single action straight jaw of 24-26mm length with fine serrations and fenestration , rotating, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable

Grasping forceps- Fenestrated- Single action curved jaws of 35-40 mm length with fine serrations and fenestration, rotating, size 5mm, length 43-46cm, dismantling facility, plastic handles with ratchet, autoclavable

Babcock Grasping forceps- (5 mm)- Double action jaws, atraumatic fenestrated, rotating, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable

Babcock Grasping forceps- (10 mm)- Double action robust jaws with large atraumatic gripping surface, rotating, size 10mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable

Dissecting and Grasping Forceps- Single action, atraumatic, fenestrated, curved jaws of length 25-28mm, rotating, size 5 mm, length 33-36cm, dismantling type, , plastic handles with ratchet, autoclavable

Dissecting Forceps- Right Angled- Double action jaws , rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, , plastic handles without ratchet, autoclavable

Fan shaped retractor- Rotating with 4-5 blades, size 5mm, length 33-36cm, dismantling facility

Hook Scissors- Double action jaws , rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, , autoclavable

Rotating Metzenbaum Scissors- Double action jaws of length 14-16mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, autoclavable , Insert of Metzenbaum scissors

Bipolar coagulating forceps- Wide jaws for dissection, grasping large vessels, size 5mm, length 33-36cm fenestrated. Jaws with robust hinge and 360° rotational, ring handles, can be completely disassembled and a cleaning port, autoclavable



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Spoon Forceps- 10 mm size, without ratchet

Reusable Hem-o-lock clip applicator- 10 mm size

Bipolar coagulating forceps (Only Insert)- Maryland type jaw of 18-20 mm length, and 3436 cm long to fit into the other parts of No. 23, autoclavable

Needle Aspirator- Size 5mm, length 30- 36cm, Needle diameter of 1.5-2 mm

Needle holder (Disengageable, coaxial type)- Size 5mm, tungsten carbide tip, straight handle with ratchet, single moving with curved tip to left, length 33-36cm

Needle holder insert (Straight type)- Size 5mm, tungsten carbide tip, single moving straight jaws, length 33-36cm.

Extracorporeal Knot pushers- Closed Eye type, length 28-32cm, size 3mm

Endoloop applicator - To fit into trocar size of 6 mm

Clip Applicator - Medium Large- Rotatable, provision for locking the shaft conveniently, 10mm, compatible with clip LT 300

Clip Applicator – Large- Rotatable, provision for locking the shaft conveniently, 10mm, compatible with clip LT 400

Hassan cone- Adaptable to 10mm trocar

Reduction Sleeves/Extractors- From 10/11mm to 5mm, metallic

Reducers- from 10/11mm to 5mm

L-Hook- Size 5mm, length 33-36cm with pin for cautery

J- Hook- Size 5 mm, length 33-36 cm

Spatula- Size 5mm, length 33-36cm with pin for cautery

Fascia closure instrument- Size 2.8mm, length 17cm with single action jaw

High Frequency Cord- For 5mm & 10mm hand instruments with Monopolar Electrodes

Washers- For 5 & 10 mm cannula and reducers

Fibreoptic Light cables- With straight connectors of 4.8mm diameter and 250 cm long and 300 cm long

Light Adaptor- Angled 90°, diameter 4.8 mm, free rotatable, to connect with standard telescopes

Container Systems: Metal & Plastic- For sterilization and storage of telescopes, hand instruments and other accessories of different sizes

Bipolar HF connecting cable

Unipolar HF cables



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Hydatid suction cannula

Cleaning Brush- Length 35 cm, 0.0 -7 mm

Cleaning Brush- Length 35 cm, 0.0 -2.5 mm

Cleaning Brush- Length 50 cm, 0.0 -11 mm

Cleaning Brush- Length 50 cm, 0.0-7 mm

Oil dropper

Silicon Oil for instruments- Bottle of 50 ml

Special lubricant for stopcocks

Duraglit for polishing metal sheaths and instruments

Formalin chamber- Made of Virgin acrylic 4.5 mm thickness, size 26" x 8" x 8" (LxBxH) with three tray for sterilizing lap. Set



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