Endoscopy Unit/HDVideo Endoscopy System (UGI, LGI)

A. HIGH DEFINITION VIDEO COLONOSCOPE :

1. Built in HDTV compatible charge coupled device(CCD)/complementary metal oxide semiconductor (CMOS) with close focus observation capacity.
2. Should be suitable for special detection technology for detailed observation by enhancing visibility of blood capillaries & mucosa like NBI/BLI/LCI/iSCAN or equivalent.
3. Scope should be fully immersible in water without the requirement of a water-resistant cap
4. Waterproof One-touch connector which is fully immersible in disinfectant solution.
5. Should have latest features like High Force Transmission, Passive Bending and Variable stiffness or similar/equivalent feature for ease of operation
6. In-built auxiliary water jet for mucosal cleaning
7. Inbuilt scope identification memory chip for monitor display of scope's model number, serial number, white balance memory.
8. Field of view: Normal:140 degree or more
9. Direction of view : Forward viewing
10. Depth of field :2-100mm or better
11. Insertion tube outer diameter: 12.8mm or less
12. Tip Bending range upto : Up & Down 180 degree or better, Left & Right 160 degree or better
13. Working length: 1650 mm or more
14. Channel inner diameter: 3.7 mm or more
15. Total Length: 2000mm or more
16. Electronic zooming function upto 1.5x or more.
17. Compatible with leakage testing device with its air flow and pressure regulation through light source's air pump

B. GASTROVIDEOSCOPE

1. Built in HDTV compatible charge coupled device(CCD)/complementary metal oxide semiconductor (CMOS) with close focus observation capacity
2. Should be suitable for special detection technology for detailed observation by enhancing visibility of blood capillaries & mucosa like NBI/BLI/LCI/iSCAN or equivalent.
3. Waterproof One-touch connector which is fully immersible in disinfectant solution
4. In-built Auxiliary water jet for mucosal cleaning
5. Shake reduction or Pre-freeze function for sharper images or similar/equivalent feature
6. Electronic zooming function upto 1.5x or more
7. Scope should be fully immersible in water without the requirement of a water-resistant cap
8. Inbuilt scope identification memory chip for monitor display of scope's model number, serial number, white balance memory.
9. Compatible with leakage testing device with its air flow and pressure regulation through light source's air pump
10. Field of view : 120 degree or more for normal view
11. Direction of view : forward viewing

12. Depth of field :2-100 mm or better
13. Insertion tube outer diameter : 9.5 mm or less
14. Tip Bending range upto : Up 210 degree/ Down 90 degree or better, Left & Right 100 degree or better.
15. Working length :1100 mm or less
16. Channel inner diameter : 2.8 mm or more
17. Minimum Visible distance : 3 mm or closer from distal end

C. DUODENOSCOPE:

1. Built in HDTV compatible charge coupled device(CCD)/complementary metal oxide semiconductor (CMOS) with close focus observation capacity.
2. Should be suitable for special detection technology for detailed observation by enhancing visibility of blood capillaries & mucosa like NBI/BLI/LCI/iSCAN or equivalent.
3. Waterproof One-touch connector which is fully immersible in disinfectant solution
4. Dual locking (Central & Side) mechanism or similar/equivalent mechanism for 0.025" & 0.035" guidewires
5. Compatible with leakage testing device with its air flow and pressure regulation through light source's air pump
6. Option to flush the distal end/removable cap to clean the distal end.
7. Field of view: 100 degree or more
8. Direction of view: Retro viewing 15 degree/5degree
9. Depth of field :4mm to 60 mm or better
10. Distal end outer diameter:13.7 mm or less
11. Insertion tube outer diameter:12.5 mm or less
12. Tip Bending range upto: Up 120 degree/Down 90 degree or better, Left 90 degree/Right 110 degree or better.
13. Working length: 1200 mm or more
14. Channel inner diameter:4.2 mm or more
15. Inbuilt scope identification memory chip for monitor display of scope's model number, serial number, white balance memory.

D. VIDEO PROCESSOR:

1. Processor must be compatible for use with three scopes (Gastroscope, Duodenoscope and Colonoscope).
2. Compatible with real time optical chromoendoscopy technology
3. The system should have compatible analog and digital (HD-SDI, DVI) output 1920X1080.
4. Picture-in-picture and index functions for enhanced observation
5. Should support close focus observation upto 2mm or better
6. Zoom function up to 1.5X or better
7. Edge and structure enhancement functionality
8. Scope's Identification: Data such as scope's model & serial no., comments, cumulative uses, check period, owner, customer ID etc., should be storable and recallable. White balance memorization
9. It should be compatible for use with Endoscopic ultrasound.
10. Automatic white balancing and automatic IRIS control.

11. Internal Memory of atleast 1GB and external portable memory atleast 02GB.

E. LIGHT SOURCE:

1. High intensity Xenon Light source (300W) or Multi LED (03 or more lamps) with long life (minimum 5000 hours)
2. Equipped with real time optical chromoendoscopy technology
3. Automatic light adjustment
4. Equipped with forced air-cooling, regulated air-feeding pump and fan with low noise
5. Compatible for waterproof one touch connector.

F. Medical Grade LCD Monitor:

1. 24 inch or bigger Medical Grade monitor
2. High Definition display
3. Wide viewing angle
4. Adjustable image size by using various scanning modes. Synchronizing full height and full screen functionality
5. Compatible for Multiple inputs (HD/DVI and SD/HDI/HDMI)
6. Multi-modality display capability including picture-in-picture (PIP) and picture-out-picture (POP)
7. 180 degree rotation display.

G. CO2 Insufflator

1. One button start/stop operation, pressure display and timer function to automate CO2 insufflations shutoff.
2. Should have two controlled flowrate settings
3. Should have maximum pressure feed of 65KPA
4. Should be from the same OEM

H. Water Jet flushing Pump

1. Should be able to irrigate the fluid down either instrumentation or auxiliary water channel
2. Water container with minimum One Liter capacity
3. Easy foot switch operation
4. Should be from the same OEM

I. Automatic Endo washer

1. Should have facility of reprocessing 02 endoscopes at a time
2. Should have facility of digital air mode and water proof mode.
3. Should have high pressure cleaning facility.
4. Should have in-built printing facility to ensure completion of reprocessing procedure.
5. Washing time should be 1 to 10 minutes.

6. Disinfection time should be 05 to 60 minutes.
7. Should have built in heater in cleaning tub.
8. Tank capacity-Water 09 litres, Alcohol 01 litres, Detergent 01 litres or better.
9. Chamber capacity-16 Litres or better.
10. Frequency 50/60 Hz
11. Should be able to perform water leak test for scopes.
12. Should be compatible for Upper GI, Lower GI, Duodenoscope including EUS. The vendor must provide certificate of compatibility in this regard.

J. Accessories:-

Leakage Tester for each scope , Biopsy valves (20 Nos), cleaning brushes for scopes (atleast 05 for each scope), endoscopy trolley and all the necessary connecting cables, other accessories should be provided to make the endoscopy system completely functional.

k. Image/Video Recording Software

1. High definition image and video capture
2. Should be integrated with Foot Switch for still and video recording
3. Should be able to capture images, videos or both simultaneously
4. Pause and Resume function while recording
5. Should have multiple templates for reporting
6. Any upgradation of software within warranty and CMC period of equipment will be done free of cost by OEM/Vendor.

L. General Terms and Conditions

1. Should be US FDA/BIS/CDSCO/CE Certified
2. Cost of consumables not covered under warranty and CMC should also be quoted separately.
3. System should have 02 years Warranty followed by 08 years CMC for all components
4. System should be supplied with Cabinet for storing and drying the scope.
5. Standby scopes/processor/light source should be provided in case of repair