OFFICE OF THE PRINCIPAL GURU GOBIND SINGH MEDICAL COLLEGE & HOSPITAL, FARIDKOT

PRE-BID MEET NOTICE Tender for ENDOSCOPY SUITE

Manufacturers/Authorized Distributors/Firms are invited to attend PRE-BID meet to finalize the Specifications (Specifications Attached below) for Installation of Endoscopy Suite required at this Institution.

- 1. Tender instruction document including terms & conditions will be available on the University Website www.bfuhs.ac.in and on College website www.ggsmch.org.
- 2. Pre-Bid meeting will be held on 12.12.2016 at 12.30 Pm in the office of Principal, GGS Medical College, Faridkot.

PRINČÍPAL

cess	ories for endoscopic procedures and ERCP	Quant
1)	Metallic large biopsy forceps reusable for gastroscope	2
	Spiked with surgical edges, 160cm long, 2.4mm cup diameter	
2)	Metallic reusable large biopsy forceps for colonoscope	3
	Spiked, surgical edges, 230cm, 2.4mm cup diameter	
3)	Metallic reusable jumbo colonoscopic biopsy forceps, fenestrated	2
	Spiked 230cm, 2.8mm cup diameter, surgical edges	
4)	Metallic reusable biopsy forceps for use with side viewing .	2
	Endoscope, spiked, surgical edges	
5)	Endobiliary biopsy forceps, reusable	3
6)	Hot biopsy forceps for colonoscopy, fenestrated non spiked	2
	2.4mm cup diameter, 230 cm, serrated edges	
7)	double lumen biliary cytology brush with radio-opaque tip markings	2
	With 6Fr catheter and 2.5cm long brush compatible with 0.035 inch guidewire	9
8)	endoscopic injection needle with catheter metallic reusable, colonic length	5
9)	multiband ligator set of 6 bands for EVL, with barrel, 6 bands and trigger core	1 20
10	multiband ligator set of 6 bands for EVL, barrel with 6 bands, trigger cord,	20
	loading catheter, precision control handle and irrigation adapter, compatible	
	with 2.8mm accessory channel	
11	controlled radial expansion balloon dilatation catheter 15-18mm, through	1
	the scope, 240 cm, compatible with 2.8mm biopsy channel	
12	controlled radial expansion balloon dilatation catheter 12-15mm, through	ı
	the scope, 240cm, compatible with 2.8mm biopsy channel	
13	controlled radial expansion balloon dilatation catheter 10-12mm, through	Ī
	the scope, 240cm, compatible with 2.8mm biopsy channel	
14	integrated quantum inflation device compatible with the above balloon	1
	dilators with pressure gauge, dilatation syringe and handle reusable type	
15	controlled radial expansion through the scope biliary dilatation balloons	1
	6-8mm	
16	controlled radial expansion through the scope biliary dilatation balloons	1
	8-10mm	
17	controlled radial expansion through the scope biliary dilatation balloons	1
	10-12mm	
18)	biliary balloon inflation device, sterilisable and reusable, compatible with	1
	the above biliary dilatation	
19	Sohendra biliary dilatation catheter 6Fr, 200cm with 4 Fr taper 3cm length	1
20)	Sohendra biliary dilatation catheter 8Fr, 200cm with 6Fr taper 3 cm length	1
21)	Sohendra biliary dilatation catheter 10 Fr, 200 cm with 6 Fr taper 3cm length	l
22)	Achalasia pneumatic dilatation balloon 30mm, balloon length 10cm, wire	2
	Guided with radio-opaque markers	
23)	Achalasia pneumatic dilatation balloon, 35mm, balloon length 10cm, wire	2
	Guided with radio-opaque markers	
24)	Achalasia pneumatic dilatation balloon, 35mm, balloon length 10cm, wire	l
	Guided with radio-op0aque markers	
25)	Achalasia pneumatic hand pump and Monitor compatible with the above 1	
	Balloons	
26	SG dilator set	1

Å,

27)	Rat tooth Alligator jaw forceps for endoscopic foreign body removal	1	
28)	Rat tooth endoscopic foreign body retrieval forceps	Ī	
29)	Metallic reusable rat toothed forceps 2.5mm cup diameter for use with	I	
	Colonoscope, length 230 cm		
30)	Three pronged grasping forceps for foreign body retrieval, use with	1	
	Colonoscope, 240 cm length		
31)	Roth net retriever colonic length 2		
32)	Gaurdus overtube	1	
33)	Polypectomy snare, small oval loop, braided, loop diameter 1.5 X 3cm	3	
	Length 240cm, compatible for use with electrosurgical unit		
34)	Polypectomy snare, standard oval loop, braided, loop diameter	3	
	2.5 X 5.5cm, Length 240cm, compatible for use with electrosurgical unit		
35)	Polypectomy snare, hexagonal loop, braided, loop diameter	3	
	3 X 4.5cm, Length 240cm, compatible for use with electrosurgical unit		
36)	Endoloop alongwith handle	1	
37)	Endoloop box of 10pcs, loop diameter 25mm	1	
38)	Clips 90 degree(box)	1	
39)	Clips 135 degree(box)	1	
40)	Clip fixing device, colonic length		1
41)	Canulating sphincterotome 7Fr tapered to 5Fr, triple lumen with 6		
	20-25mm cutting wire with insulated coating at proximal part of cutting		
	Wire, precurved radiopaque dome tip, compatible with 0.035 inch guidewire		
42)	Canulating sphincterotome 6Fr tapered to 5Fr, triple lumen with 2		
	20-25mm cutting wire with insulated coating at proximal part of cutting		
	Wire, precurved radiopaque dome tip, compatible with 0.035 inch guidewire		
43)	Needle knife cannulotome 5Fr 200cm with 3-5mm cutting needle compatible	2	
	With 0.035 inch guidewire		
44)	Dormia ERCP stone retrieval basket with 4 wire design, 2-2.5 X 5 cm basket	3	
	7Fr 220 cm multifilament basket		
45)	Dormia ERCP stone retrieval basket with 6 wire design, 2-2.5 X 5 cm basket	2	
	7Fr 220 cm multifilament basket		
46)	Mechanical lithotripter with strong wire dormia, metal sheath, handle	2	
	And cable		
47)	Sohendra metallic mechanical lithotripter including handle and cable	1	
48)	Biliary extraction balloon 3.5-15mm with extra hub to allow guidewire	3	
	Accessible injecting contrast and balloon inflation or deflation 6Fr 200cm		
49)	Floppy terumo fully hydrophilic ERCP guidewire 260 cm 0.035inch	5	
50)	5.5 Fr 200cm ERCP canula compatible with 0.035 inch guidewire contour		5
	type tapered tip to 4.5Fr with radiopaque distal tip markings		
51)	5.5 Fr 200cm ERCP canula compatible with 0.025 inch guidewire contour		2
	type tapered tip to 3.5Fr with radiopaque distal tip markings		
52)	Double lumen ERCP catheter 5.5 Fr 200cm compatible with 0.035	2	
	inch guidewire, tapered tip with radiopaque distal tip markings		
53)	Triple lumen ERCP catheter 8 Fr 200cm tapered tip radiopaque distal end	6	
54)	Floppy terumo fully hydrophilic guidewire200 cm 0.025inch	2	
55)	Stiff striped ERCP guidewire 480cm 0.035inch with soft flexible spring	2	
	Coil tip		
56)	ERCP guidewire with atleast 5cm floppy tip striped, 450cm, 0.035	2	

.*

2

, A L

* >

1)	Metallic large biopsy forceps reusable for gastroscope	2
	Spiked with surgical edges, 160cm long, 2.4mm cup diameter	
2)	Metallic reusable large biopsy forceps for colonoscope	3
	Spiked, surgical edges, 230cm, 2.4mm cup diameter	
3)	Metallic reusable jumbo colonoscopic biopsy forceps, fenestrated	2
	Spiked 230cm, 2.8mm cup diameter, surgical edges	
4)	Metallic reusable biopsy forceps for use with side viewing	2
	Endoscope, spiked, surgical edges	
5)	Endobiliary biopsy forceps, reusable	3
6)	Hot biopsy forceps for colonoscopy, fenestrated non spiked	2
	2.4mm cup diameter, 230 cm, serrated edges	
7)	double lumen biliary cytology brush with radio-opaque tip markings	2
	With 6Fr catheter and 2.5cm long brush compatible with 0.035 inch guidewire	
8)	endoscopic injection needle with catheter metallic reusable, colonic length	5
9)	multiband ligator set of 6 bands for EVL, with barrel, 6 bands and trigger cord	20
-	multiband ligator set of 6 bands for EVL, barrel with 6 bands, trigger cord,	20
·	loading catheter, precision control handle and irrigation adapter, compatible	
	with 2.8mm accessory channel	
11)	controlled radial expansion balloon dilatation catheter 15-18mm, through	1
,	the scope, 240 cm, compatible with 2.8mm biopsy channel	
12)	controlled radial expansion balloon dilatation catheter 12-15mm, through	1
,	the scope, 240cm, compatible with 2.8mm biopsy channel	
13)	controlled radial expansion balloon dilatation catheter 10-12mm, through	1
,	the scope, 240cm, compatible with 2.8mm biopsy channel	
14)	integrated quantum inflation device compatible with the above balloon	1
,	dilators with pressure gauge, dilatation syringe and handle reusable type	
15)	controlled radial expansion through the scope biliary dilatation balloons	1
13)	6-8mm	_
16)	controlled radial expansion through the scope biliary dilatation balloons	1
201	8-10mm	_
171	controlled radial expansion through the scope biliary dilatation balloons	1
,	10-12mm	_
18)	biliary balloon inflation device, sterilisable and reusable, compatible with	1
10)	the above biliary dilatation	_
19)	Sohendra biliary dilatation catheter 6Fr, 200cm with 4 Fr taper 3cm length	1
	Sohendra biliary dilatation catheter 8Fr, 200cm with 6Fr taper 3 cm length	1
	Sohendra biliary dilatation catheter 10 Fr, 200 cm with 6 Fr taper 3 cm length	1
•	Achalasia pneumatic dilatation balloon 30mm, balloon length 10cm, wire	2
22)	Guided with radio-opaque markers	2
221	·	2
43)	Achalasia pneumatic dilatation balloon, 35mm, balloon length 10cm, wire	۷
241	Guided with radio-opaque markers Achalacia programatic dilatation halloon, 25mm, halloon longth 10cm, wire	1
Z4)	Achalasia pneumatic dilatation balloon, 35mm, balloon length 10cm, wire	Т
	Guided with radio-op0aque markers	

25)	Achalasia pneumatic hand pump and Monitor compatible with the above Balloons	1
261	SG dilator set	1
	Rat tooth Alligator jaw forceps for endoscopic foreign body removal Rat tooth endoscopic foreign body retrieval forceps	1
	Metallic reusable rat toothed forceps 2.5mm cup diameter for use with	1
231		1
201	Colonoscope, length 230 cm Three pronged grasping forceps for foreign body retrieval, use with	1
30)		1
211	Colonoscope, 240 cm length Roth net retriever colonic length	7
	Gaurdus overtube	2 1
	Polypectomy snare, small oval loop, braided, loop diameter 1.5 X 3cm	3
221		2
241	Length 240cm, compatible for use with electrosurgical unit Polypectomy snare, standard oval loop, braided, loop diameter	2
34)	2.5 X 5.5cm, Length 240cm, compatible for use with electrosurgical unit	3
251		9
55]	Polypectomy snare, hexagonal loop, braided, loop diameter	3
261	3 X 4.5cm, Length 240cm, compatible for use with electrosurgical unit	1
	Endoloop alongwith handle Endoloop box of 10pcs, loop diameter 25mm	1 1
	Clips 90 degree(box)	1
	Clips 135 degree(box)	1
	Clip fixing device, colonic length	1
		6
41)	Canulating sphincterotome 7Fr tapered to 5Fr, triple lumen with 20-25mm cutting wire with insulated coating at proximal part of cutting	
421	Wire, precurved radiopaque dome tip, compatible with 0.035 inch guidewire	7
44)	Canulating sphincterotome 6Fr tapered to 5Fr, triple lumen with 20-25mm cutting wire with insulated coating at proximal part of cutting	2
	Wire, precurved radiopaque dome tip, compatible with 0.035 inch guidewire	
13/	Needle knife cannulotome 5Fr 200cm with 3-5mm cutting needle compatible	2
431	With 0.035 inch guidewire	
441	Dormia ERCP stone retrieval basket with 4 wire design, 2-2.5 X 5 cm basket	3
44)	7Fr 220 cm multifilament basket	J
45)	Dormia ERCP stone retrieval basket with 6 wire design, 2-2.5 X 5 cm basket	2
45)	7Fr 220 cm multifilament basket	_
46)	Mechanical lithotripter with strong wire dormia, metal sheath, handle	2
40)	And cable	_
171	Sohendra metallic mechanical lithotripter including handle and cable	1
-	Biliary extraction balloon 3.5-15mm with extra hub to allow guidewire	3
40)	Accessible injecting contrast and balloon inflation or deflation 6Fr 200cm	,
491	Floppy terumo fully hydrophilic ERCP guidewire 260 cm 0.035inch	5
	5.5 Fr 200cm ERCP canula compatible with 0.035 inch guidewire contour	5
50)	type tapered tip to 4.5Fr with radiopaque distal tip markings	,
51)	5.5 Fr 200cm ERCP canula compatible with 0.025 inch guidewire contour	2
ريدر	type tapered tip to 3.5Fr with radiopaque distal tip markings	
521	Double lumen ERCP catheter 5.5 Fr 200cm compatible with 0.035	2
221	boddie iemen ener dameter die in zodem compatible with 0.000	_

	inch guidewire, tapered tip with radiopaque distal tip markings	
53)	Triple lumen ERCP catheter 8 Fr 200cm tapered tip radiopaque distal end	6
54)	Floppy terumo fully hydrophilic guidewire200 cm 0.025inch	2
55)	Stiff striped ERCP guidewire 480cm 0.035inch with soft flexible spring	2
	Coil tip	
56)	ERCP guidewire with atleast 5cm floppy tip striped, 450cm, 0.035	2
57)	Hybrid ERCP guidewire with atleast 5 cm floppy tip, striped, 450cm, 0.032	2
58)	Hybrid ERCP guidewire with atleast 5 cm floppy tip, striped, 450cm, 0.025	2
59)	480cm 0.035 inch angled tip guidewire with atleast 5cm aquaphilic coating	1
	Striped wire which may be left in place during sphincterotomy	
60)	7 Fr stent pusher catheter compatible with 0.035 inch guidewire	2
61)	One action stent introducing system for delivery of 10 Fr and above stents	1
	With sliding catheter compatible with 0.035 inch guidewire and pusher	
	System, atleat 4 radioopaque markers 5cm apart	
62)	ERCP stent retrieval forceps metallic and reusable	1
63)	22G FNA needle for EUS	2

Videoendoscopy System

SPECIFICATION FOR GASTROENDOSONOGRAPHY SYSTEM

ULTRASONIC GASTROVIDEOSCOPE (RADIAL)

- Should have 360 degree electrical radial array.
- Should have EUS images with four or more selectable frequencies
- Should have Colour and Power Doppler for effective confirmation of blood flow
- Should have lens cleaning function for keeping the endoscopic field of view clear at all times
- Distal end should have short rigid portion for less trauma to the patient
- EUS Scope should be fully immersible for thorough cleaning

- Field of view : 100-120 degree

- Direction of view : 50-60 degree Forward-oblique or forward viewing

- Depth of field : 3 to 100 mm or less

- Insertion tube outer diameter : 11-12.6 mm

- Instrument channel diameter : 3-4 mm

- Working Length : 1250 mm or more

- Bending section : Up 130 deg, Dn 90 deg, Rt & Lt 90 deg or better

ULTRASONIC GASTROVIDEOSCOPE (LINEAR)

- Should have 180 degree electrical curved linear scanning
- · Should have EUS images with four or more selectable frequencies
- Should have Colour and Power Doppler for effective confirmation of blood flow
- Should have lens cleaning function for keeping the endoscopic field of view clear at all times
- Distal end should have short rigid portion for less trauma to the patient
- Videoscope should have FNA (therapeutic) capability
- EUS Scope should be fully immersible for thorough cleaning
- Preferable if a cable to EUS processor is detachable from the scope itself for easier carrying purpose
- Better to have compatibility of special light function such as NBI.

- Field of view : 100-120 degree

- Direction of view : 50-60 degree Forward-oblique or forward viewing

- Depth of field : 3 to 100 mm or less

- Insertion tube outer diameter

11-12.6 mm

- Instrument channel diameter

3-4 mm

- Working Length

1250 mm or more

- Bending section

Up 130 deg, Dn 90 deg, Rt & Lt 90 deg or better

ULTRASOUND PROCESSOR

- Compact & easily transportable unit with ultrasound & color and power Doppler function.
- Should have high resolution flow mode and pulse wave Doppler function.
- Compatible with Electronic scanning and preferably mechanical scanning probes
- 3D imaging option for radial scanning probes
- Should have Power Flow, Color Flow and H-Flow mode.

:

- Should have tissue harmonic and contrast harmonic mode.
- Should have Pulse wave observation mode.
- Preferable Generated frequency range: upto 20 MHz
- Touch screen, dedicated and user friendly key board.
- Cine Memory: 500 frames or more
- Possibility to retrieve images thru USB port to record.
- AGC, GAIN, STC functions.
- Should be compatible with the existing radial probe driving unit in the department.

Technical Specifications

High Definition Video Gastroscope.:

- Built in HDTV compatible CCD with close focus observation capacity.
- Suitable for Narrow Band Imaging
- Fully immersible in disinfectant solution (no need to attach water resistant cap) & one touch connectivity.
- In built scope identification memory chip for monitor display of scope's model no. serial no., white balancing memory, no. of connections/cumulative uses etc.
- Auxiliary water jet for mucosal cleaning

Field of view : Normal/Near focus 140 degree or more

Direction of view : 0 degree, forward viewing

Depth of field : 2-100mm

Distal end outer diameter : 9.2 mm or less

Insertion tube outer diameter : 9.2 mm or less

Tip Bending rage : Up 210 deg, Dn 90 deg, Lt & Rt 100 deg.

Working length : 1030 mm or more

Channel inner diameter : 2.8 mm or more

Minimum Visible distance of : 3 mm or closer from distal end.

instrument used thru channel

Channel cleaning brush	1
(Reuse) Mouthpiece	2
Auxiliary water tube	1
Biopsy valve(10 pcs)	1
Channel-opening cleaning	1
Suction cleaning adapter	1
Channel plug	1
Injection tube	1
AW channel cleaning adapter	1
ETO-cap	1

High Definition Video Colonoscope − 1 No.:

- Built in HDTV compatible CCD Normal focus observation capacity.
- Should have Narrow Band Imaging for detailed mucosal study
- Inbuilt features like Variable stiffness, High force transmission & Passive bending for ease of insertion.
- Fully immersible in disinfectant solution (no need to attach water resistant cap) & one touch connectivity.

1

- In built scope identification memory chip for monitor display of scope's model no. serial no., white balancing memory, no. of connections/cumulative uses etc.
- Auxiliary water jet for mucosal cleaning

Field of view : In Normal focus 170 deg,

In Near Focus-160 deg or more

Direction of view : 0 degree, forward viewing

Depth of field : 2-100mm

Distal end outer diameter : 13.2 mm or less

Insertion tube outer diameter : 12.8 mm or less

Tip Bending range : Up & Dn 180 deg, Lt & Rt 160 deg.

Working length : L: 1680 mm I: 1330 mm or more

Channel inner diameter : 3.7 mm or more

Minimum Visible distance of : 4 mm (Normal) or closer from distal end.

instrument used thru channel

Channel cleaning brush	1
Auxiliary water tube	1
Biopsy valve(10 pcs)	1
Channel-opening cleaning	1
Suction cleaning adapter	1

Channel plug	1	
Injection tube	1	
AW channel cleaning adapter	1	
ETO-cap	1	
Operation manual	1	
Reprocessing manual	1	

<u>Video Duodenoscope – 1 No.:</u>

Features

- 1. Control section with new easy-to-access knob layout and ergonomic grip for improved scope manoeuvrability.
- 2. Optimum 4-way angulations to facilitate approach to the papilla.
- 3. Four remote switches for better operability.
- 4. Expanded full height monitor display for easy viewing.

Specifications

Optical System	Field of view	100°2
	Direction of view	95° Backward-oblique
	Depth of field	5 to 60 mm
Distal End	Outer diameter	13.2 mm
Insertion Tube	Outer diameter	12.5 mm
Bending Section	Angulation range	Up 120°, Down 90°, Right 110°,
		Left 90°
Working Length		1240 mm
Total Length		1550 mm
Instrument Channel	Inner diameter	4.2 mm
	Minimum visible distance	10 mm

Channel brush	1 No.
Water resistant cap	1 No.
Injection tube	1 No.
Channel opening cleaning brush	1 No.
AW channel cleaning adapter	1 No.
Suction valve	1 Nos.
Air/water valve	1 Nos.
Channel plug	1 No.
Biopsy valve	2 Nos.
Mouthpiece	1 Nos.
Suction cleaning adapter	1 No.

Video Processor:

- Should be compatible with Analog, HD-SDI and DVI output & 16:9 & 16:10 output for a HDTV monitor should be available.
- should contain the electronics to operate dual focus for clear visibility of near & far objects
- Equipped with high resolution HDTV Imaging capacity.
- Compact, light weight (10-11 kg) and ergonomically designed
- Narrow Band Imaging capacity for compatibility with NBI Videoscopes.
- Recording of both still & moving images
- equipped with one touch connection of scopes.
- Portable Memory & USB Slot for image recording
- Automatic IRIS control & automatic white balance
- Picture in Picture display & Index functionability
- Electronic Zoom upto 1.5X.
- Equipped with memory back up for settings & Lithium battery.
- Should have pre freeze function for image stabilization

White cap holder	1 No.

Foot Holder	1 No.
Scope cable holder	1 No.
SDI cable 8.5M	1 No.
Keyboard	 1 No.
Portable memory (2GB)	1 No.
Keyboard cover	1 No.
White balance cap	1 No.

<u>Light Source (Xenon short arc Ozone free 300 Watt lamp)</u>:

- Equipped with Narrow Band Imaging capability with high intensity Xenon Light source (300W) with 500 hours life.

Compatible for waterproof one touch connector.

- Equipped with special filter for Narrow Band Imaging
- Backlit front panel indicators.
- Emergency halogen light for backup.
- Equipped with automatic light adjustment forced aircooling, regulated airfeeding pump and fan with low noise.

Water container	 1 No.
Light source cable	 1 No.
Digital light source cable	 1 No.
Foot holders	 1 No.
•	

High Definition LCD Monitor - 1 No.:

- 26 inch full HD LCD monitor with high resolution 1920X1200 (WUXGA)

- Lower Power consumption
- Aspect ratio 16:9 & 16:10 with output of (1080/60I:NTSC) (1080/50I:PAL) with RGB or YPbPr
- Should have Picture-in-Picture and Picture-out-Picture for viewing side-by-side split screen images.

Specifications for Co2 Regulator - 1 No.:

- Should have one touch button for ON/OFF operation, pressure display and timer function to automatic Co2 insufflation shoutoff.
- Should have compact design to easily fit in endoscopic workstation.
- Should have 3 or more flow rate control settings.
- Should have air feeding pressure of 45 kPa or better.

Specifications for Flushing Pump - 1 No.:

- Should have standby mode to allow quick and safe exchange of water channel tubes without the need to operate the main switch.
- Should have compact design to easily fit in endoscopic workstation.
- Should have facility of automatically cut-out if pump head opened during operation.
- Should have facility of 20 second or better automatic cut-off timer to allow controlled irrigation.
- Should comply with EN/UL/IEC606D1-1 safety standards.

Maximum flow rate for instrument channel should be 700>750 ml/min and for auxiliary water channel it should be 230 ml/min or better.

Specifications for Endoscopic Trolley:

- Should have from same manufacturing company.

Specifications for Electrosurgical generator

Power connection
Rated supply voltage 100 V – 120 V
Rated supply frequency 60 Hz
Line current 8 A
Power input in standby mode 40 watts
Power input with max. HF output 500 watts / 920 VA

Specifications for Argon Plasma Coagulator

Gas specification Gas type Argon 4.8 (99.998%)

Gas-specific device data Variable gas flow 0.1 - 8 l/min limited by the instrument attached, adjustable in 0.1 increments

Purging flow Depending on the instrument (corresponds to the setpoint flow of the instrument that is currently connected)

Purging time 3 sec.

Specifications for C Arm

HF X-Ray Generator 40 KHz. High Freq. Max Power Output 6 KW

Fluoro / Radiographic KV Fluoro mA (Normal Mode) 0.1 to 5 mA Fluoro Timer 5 min. cumulative Radiographic mA 0.1 to 3 seconds FL D. Mode (Max mA) 10 mA

Tube Head Mono block with rot, anode X-Ray tube

X-Ray Tube Focal Spots Dual

Focal Spot Size

Small 0.3 mm Large 0.6 mm

Imaging System
Image Intensifier Tube 9" (230mm) Triple

with Power Supply Unit X-Ray Round Grid field (very high res.) 9" - 8:1, 100 LPI OPTIONAL : 12".II

CCD Camera 32° B/W CCD camera of very high resolution with special lens, CCIR standard - 625 lines Monitors (2 Nos.) 15 $^\circ$ Monitors of high resolution with image rotation mounted on a mobile trolley.