

अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छत्तीसगढ़)

All India Institute of Medical Sciences, Raipur (Chhattisgarh)

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Tender Enquiry No. ADMIN/Tender/ENT_Instruments/1/2013 Corrigendum for ENT Instruments

S.No	Page no/ clause no	Existing parameter	Amendment
1.	Pg 1 Clause 3	Close for Bidding – Submission of	Close for Bidding – Submission of
		Tender 26.10.2013 12:30 PM &	Tender 31.10.2013 03:00 PM &
		Opening at same date 1:00	Opening at same date 03:30
2.	Pg 22, Clause 1,	1. Endoscopy set with FESS	It is divided into two separate
	Schedule B	instrument.	scheduled as B1 & B2
		2. Bronchoscopy Set	B1 - Endoscopy set with FESS
		3. Esophagoscopy Set	instrument.
		4. Laryngoscopes,	B2 – Rigid Endoscopy system
		hypopharyngoscopes,	1. Bronchoscopy Set,
		tracheoscopes	2. Esophagoscopy Set,
			3. Laryngoscopes,
			hypopharyngoscopes,
			tracheoscopes
3.	New Addition		EMD- ₹ 1,40,000/-
	Schedule - B1		Endoscopy set with FESS
			instrument with light source and
			camera
			Detailed specifications are attached
			in annexure-1
4.	Corrigendum S.No.	To be deleted	Incorporated in Schedule -B1
	5, 6 & 8		
5.	New addition		EMD - ₹ 15000/-
	Schedule - B2		Rigid Endoscopy system
			1. Bronchoscopy Set,
			2. Esophagoscopy Set,
			Laryngoscopes,
			hypopharyngoscopes,
			tracheoscopes
			Detailed specifications are attached
			in annexure - 2

Schedule - B1

EMD- ₹ 1,40,000/-

1.Endoscopy set with FESS instrument with light source and camera

Item with Specification.	Qty
FESS INSTRUMENTS:	
Telescope 0° 4.0MM:	02
Straight forward telescope,0 degree enlarged view, size: 4.0 MM	
rod lenses system ,Length:18-19 cms, Autoclavable, Fiber optic light transmission incorporated.	
Telescope 30° 4.0MM:	01
Forward oblique 30 degree enlarged view, size: 4.0 MM	
rod lenses system ,Length:18- 19 cms, Auto clavable, Fiber optic light transmission incorporated.	
Telescope 45°, 4.0MM:	01
Straight Forward Telescope 45 degree enlarged view, size: 4.0mm	
rod lenses system ,Length:18-19 cms, Auto clavable, Fiber Optic Light Transmission Incorporated	
Telescope 70°, 4.0MM:	01
Straight Forward Telescope 70 degree enlarged view, size: 4.0mm	
rod lenses system ,Length:18-19 cms, Auto clavable, Fiber Optic Light Transmission Incorporated	
Telescope 0°, 2.7MM:	01
Straight Forward Telescope zero degree enlarged view, size: 2.7 mm	
rod lenses system ,Length:18-19 cms, Auto clavable, Fiber Optic Light Transmission Incorporated	
Telescope 30°, 2.7MM:	01
Straight Forward Telescope 30 degree enlarged view, size: 2.7 mm	
rod lenses system ,Length:18-19 cms, Auto clavable, Fiber Optic Light Transmission Incorporated	

Item with Specification.	Qty
Telescope handle for 4mm telescope round as well as flat	02
BLAKESLEYrhinoforce nasal forceps.	3 EACH
.(Straight 13cms working length,)	EACH
sizes 0,	
1,	
2,	
3.	
BLAKESLEYrhinoforce nasal forceps.	3 EACH
(45° upturned 13cms working length) sizes 0	
1	
2	
BLAKESLEYrhinoforce nasal forceps.	3 EACH
(90° upturned 13cms working length) sizes 1	
2	
3	
BLAKESLEYrhinoforce nasal forceps.	2
(45° upturned, Handle in right horizontal position,13cms working length)	
Size 1	
GRUNWALD – HENKE RHINOFORCE nasal forceps. (Straight, Through cutting, tissue sparing, BLAKESLEY shape ,working length 13 cm)	3 EACH
Size 0- width 3mm	
1- width 3.5mm	
2- width 4mm	
GRUNWALD – HENKE RHINOFORCE nasal forceps. (45 degree upturned, through cutting, tissue sparing, BLAKESLEY shape working length 13 cm)	3 each
Size 0- width 3mm	
1- width 3.5mm	
2- width 4mm	

Item with Specification.	Qty
Mackay-Grunwald rhinoforce nasal forceps. (Through cutting, tissue sparing, straight ,working length 13 cm)	3 each
a) size 1, 8*3 mm	
b) size 2, 11.5 * 3.5 mm	
Mackay-Grunwald rhinoforce nasal forceps. (Through cutting, tissue sparing, 45 degree upturned ,working length 13 cm)	3 each
a) size 1, 8*3 mm	
b) size 2, 11.5 * 3.5 mm	
STRUYCKEN RHINOFORCE nasal cutting forceps (working length 13 cm)	2
Stammberger RHINOFORCE antrum punch.	2 each
a-upside- backward cutting, , length 10cms	
b- Right side, backward cutting, length 10cms	
c- Left side, backward cutting, length 10cms.	
Stammberger RHINOFORCE antrum punch (backward cutting,0 degree rotatable with fixing screw, take apart sheath 3, length 10cms, for use with cleaning adaptor)	2
Cleaning adaptor(for use with Stammberger RHINOFORCE antrum punch)	2
Stammberger RHINOFORCE antrum punch, small paediatric size, (backward cutting, 0 degree rotatable with fixing screw, take apart sheath 3, length 10cms, for use with cleaning adaptor)	2
Cleaning adaptor(for use with Stammberger RHINOFORCE antrum punchsmall paediatric size)	2
Stammberger antrum punch,(Right side, downward and forward cutting, length 10cms)	1
Stammberger antrum punch,(left side, downward and forward cutting, length 10cms)	1
RHINOFORCE nasal scissors (straight, length 13 cms)	2
RHINOFORCE nasal scissors (curved to right, length 13 cms)	2
RHINOFORCE nasal scissors (curved to left, length 13 cms)	2
Stammberger rhinoforce forceps (Cupped jaws, vertical opening 65° upturned, cupped jaws, diameter 3mm, working distance 12cms)	2
Stammberger rhinoforce forceps (Cupped jaws, horizontal opening 65° upturned, cupped jaws, diameter 3mm, working distance 12cms)	2
EICKEN antrum cannula. (LUER lock Long curved, length 11 cm)	2 each
OD -2.5 mm	

Item with Specification.	Qty
OD-3mm	
OD-4mm	
EICKEN antrum cannula. (LUER lock Long curved, length 15 cm)	2 each
OD -2.5 mm	
OD-3mm	
OD-4mm	
Frazier suction tube, (with mandrel & cut –off hole with distance markings at 5-9 cms, lencth 10 cms)	8 each
5 fr	
7 fr	
9 fr	
Antrum curette, oblong, small, length 19 cm	2
KUHN – BOLGER frontal sinus curette (, oval , forward cutting , length 19 cm)	2 each
- 55 degree curved	
-90 degree curved	
KUHN frontal sinus seeker(double ended , one tip straight , one tip reverse angle, length 22	2 each
cm)	
- No -2, both sides curved 90 degree No-6, both sides curved 77 degree	
Sickle knife ,pointed , length 19 cm	4
Sickle knife , round , double- cutting	4
Plester sickle knife (double edged, slightly curved, length 16cm)	2
Freer elevator, (double-ended, semi-sharp and blunt, length 20 cm)	5
STAMMBERGER punch, (circular cutting, working length 18 cm)	2 each
Diameter- 3.5mmDiameter- 4.5mm	
STAMMBERGER punch, (circular cutting, 65 degree upturned, working length 17 cm)	2 each
- Diameter- 3.5mm	
- Diameter- 4.5mm STAMMBERGER punch, (egg shaped ,circular cutting, 90 degree cutting direction	2 each
upturned, sheath 65 degree upturned, working length 17 cm)	
- Diameter- 3.5mm	
- Diameter- 4.5mm	
Cleaning adaptor(for use with Stammberger RHINOFORCE antrum punch)	2

Item with Specification.	Qty
Bipolar coagulation forceps, insulated angular, blunt with integrated suction channel, cut off hole length 19 cm	02
MICRODEBRIDER, consisting of main control unit with speed upto not less than 40000 rpm,	01
inbult irrigation pump, forward & reverse cutting, Shaver hand piece with micromotor (speednot less than 40000 rpm), with integrated suction channel, mains cord, two-pedal footswitch, silicon tubing for irrigation. Handpiece, Suction shaver blades (straight cutting edge, rectangular/oblique cutting window, concave cutting edge, serrated cutting edge – 2 nos each), clip set and tubing set.	
. Full High Definition Three Chip Camera System:	01
1. Camera control unit with 3 chip HD camera head having HD CCD chip of same aspect ratio of 16:9	
2. Pure Digital signal with high definition video(1920*1080 P)	
with aspect ratio 16:9 with DVI-D, RGB, S-VHS video output.	
3. Integrated Flexible Scope filter	
4. Progressive scan technology	
5. Brightness Control	
6. Aperture Control	
7. Automatic digital Image Enhancer	
8. Should have integrated optical zoom lens 14-30mm, to increase and decrease the size of image which should remain in focusing zone, without readjusting the focus.	
9. Should have Integrated Gain, shutter, Enhancement, white balance with brightness control.	
10. Should have peripheral control on CCU for	
11. Should have USB/Image Capture Module interface for direct storage of still & video sequences and to print the still images or complete external video recoding of medical grade should be provided.	
12. The camera head should have integrated zoom and focus lens/rings to make it fully soakable.	
13. Should be IEC 601-1, CE according to MDD.	
High Resolution HDVideo medical grade Monitor:	01
24" or 26" High Definition Medical grade Monitor, resolution 1920 X 1200 with DVI, RGB, input,	
option for wall mounting and desktop in same unit. Should have same aspect ratio of 16:9 or 16:10 of the endoscopic HD camera system.	
Fast response time:(5-12ms)	

Item with Specification.	Qty
Number of colors:16.8 million	
Luminance: 400cd / m2. Contrast ratio: 1000:1	
Vertical/Horizontal Viewing Angle:178 degree	
Xenon Light Source:	01
Xenon light source of 175 Watts	
Should be able to produce color temperature of 6000 K	
Should have continuous manual adjustement of light output.	
Should have standby mode and automatic recovery of last setting of intensity of light.	
Should be able to display lamp life in digital form and should give visual indication for replacement of xenon lamp in case of lamp life of 500 Hrs is over.	
Should be certified IEC 601-1 and CE according to MDD.	
Xenon spare lamp of 175 Watts suitable for Xenon light source	01
Fiber Optic Light Cable:	02
Fiber Optic light cable of actual bundle size: 3.5-3.8mm, length: 250-275cm.	
Video Trolley:	01
Suitable Medical Grade video trolley to be supplied for mounting 7equipments having minimum three self in addition to with one drawer, with antistatic wheel casters, front lockable, high grade of electrical insulation and earth protection. 5 Ampere socket, 10Nos, inbuilt with trolley to connect all electronic devices. CO2 bottle stand should be integrated with trolley. Potential equalization connection to be provided at least 8 points. Preferably from OEM.	
Sterlization/Disinfection Tray:	02
Disinfection/Sterlization tray with sieve tray to lift. Size: 27"x7"x5"(LxBxD	
Suitable Autoclavable plastic tray double tray for sterilization and storage for hand instruments of minimum 20 hand instruments preferably from OEM.	02
UPS:	01
Suitable UPS with One hour backup time with SMF Batteries & Stand. Should be able to work on wide input range between 160-270 VAC at 7requency between $50\text{Hz} \pm 2\text{Hz}$, Should use PWM technology with power conversion with single transformer arrangements with an output of $220\text{VAC} \pm 5\%$, protection of overload, short circuit and low battery. Should have indication on front panel for mains load/battery load/ battery overload-low and MCB protection in case of short circuit. ISI/CE approved good quality Indian make.	

Environmental factors

- 1. Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
- 2. The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%
- 3. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%

Power Supply

- 4. Power input to be 220-240VAC, 50Hz fitted with Indian plug
- 5. UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.

Standards, Safety and Training

- 1. Should be FDA, CE, UL or BIS approved product
- 2. Manufacturer should have ISO certification for quality standards.
- 3. Comprehensive training for lab staff and support services till familiarity with the system.
- 4. Comprehensive warranty for 2 years with no fault warranty in the first year and 5 years CMC after warranty including UPS.
- 5. Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.
- 6. The core FESS equipments like Telescopes, Endovision Three chip HD camera, light source, hand instruments, fiber optic cable, Video monitor & should be from single manufacturer for system compatibility.

Documentation

- 1. User/Technical/Maintenance manuals to be supplied in English.
- 2. List of important spare parts and accessories with their part number and costing.
- 3. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.
- 4. Certificate of calibration and inspection.
- 5. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
- 6. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Schedule B2

EMD-₹ 15000

Rigid Endoscopy System

1. Bronchoscopy Set

A. Technical Specification for the Instruments required for Rigid Bronchoscope Set for Adult for the Deptt. Of E.N.T.

The Technical Specification should be as follows:

 Description	Qty.	
Straight Forward Telescope 0°, diameter 4.5 mm,length 50 cm, autoclavable. Fiber optic light transmissionincorporated,	ONE	
Bronchoscope Tube Universal, without distal fiber optic light carrier, for use with proximally insertable prismatic light deflector and plugs length 43 cm, size 8.5	ONE	
Bronchoscope Tube Universal, without distal fiber optic light carrier, for use with proximally insertable prismatic light deflector and plugs length 43 cm, size 7.5	ONE	
Bronchoscope Tube Universal, without distal fiber light carrier, for use with proximally insertable prismatic light deflector and plugs length 43 cm, size 6.5	ONE	
Prismatic Light Deflector with connection for fiber optic light cable.	ONE	
Glass Window Plug	ONE	
Rubber Telescope Guide	ONE	

Adaptor with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable, for use with Full Lumen Tracheoscopes and Bronchoscopes	ONE
Injection Cannula for possitive pressure assisted ventilation system, O.D. 3.5 mm for use with bronchoscopes and tracheoscopes with LUER-lock fermale fitting	ONE
Tube Guide, for Bronchoscope	ONE
Adaptor from bronchoscope to any type of pediatric respiration equipment.	ONE
Plug for Ventilation Attachment of Bronchoscopes	ONE
Bronchoscopic Forceps, circular cup, biopsy, malleable, double action jaws, diameter: 2.5 mm, working length 50 cm	TWO
Bronchoscopic Forceps, universal biopsy and grasping, double action jaws, diameter: 2.5 mm, working length 50 cm	TWO
Bronchoscopic and Esophagoscopic Forceps, universal biopsy and grasping, double action jaws, diameter: 2.0 mm, working length 35 cm	TWO
Bronchoscopic and Esophagoscopic Forceps, alligator, grasping, double action jaws, diameter 2.0 mm, working length 35 cm	TWO
Bronchoscopic Forceps, alligator, grasping, double action jaws, diameter: 2.0 mm, working length 45 cm	TWO
Bronchoscopic Forceps, universal, biopsy and grasping, double action jaws, diameter: 2.0 mm, working length 45 cm	TWO
Rigid Suction Tube, working length 35 cm	TWO
Suction Tube for Bronchoscopy, O.D. 2,5 mm working length 50 cm	TWO

B. Technical Specification for the Instruments required for Pediatric Bronchoscope for the Deptt. Of E.N.T

The Technical Specification should be as follows:

Straight Forward Tele- scope 0°,	ONE		
diameter 2.9 mm, working length 36 cm,			
auto- clavable. Fiber optic light			
transmission incorporated.			
Bronchoscope, length 30 cm, size 6	ONE		
Bronchoscope, length 30 cm, size 4.5	ONE		
Bronchoscope, length 30 cm, size 3.5	ONE		
Bronchoscope, length 26 cm, size 3	ONE		
Optical Alligator Forceps for Pediatric	TWO		
Broncho-Esophagoscopes, for use with telescope			
forced controlled handle for removal			
of hard foreign bodies			
Optical Forceps for Pediatric	ONE		
Broncho-Esophagoscoes, with bean jaes,			
for use with telescope forced			
controlled handle for removal of peanuts			
and soft foreign bodies			
Optical Forceps, for use with	ONE		
telescope for biopsy.			
Optical Pediatric Scissors, for use with	ONE		
telescope and Broncho-Esophagoscopes,			
length 30, 26 and 20 cm, sizes 6 - 3.5			
Optical Forceps for use with telescope	ONE		
Universal, biopsy and grasping.			
Rubber Telescope Guide for use with	ONE		
telescopes or optical for- ceps			
Adaptor with sliding glass window plug,	ONE		
sealing cap, notched lens and keyhole opening,			
moveable.			
Guiding Piece, short, for suction catheter for	ONE		
children and suckling bronchoscope			
Adaptor from bronchoscope to any type of	ONE		
pediatric respiration equipment.			
Plug for Ventilation Attachment of Bronchoscopes	ONE		
Injection Cannula for possitive pressure	ONE		
assisted ventilation system, O.D. 2.7 mm,			
for use with bronchoscopes and			
tracheoscopes with LUR-lock female fitting			

C Technical Specification for the Instruments required for Neonate Bronchoscope for the Deptt. of E.N.T

The Technical Specification should be as follows:

Bronchoscope, length 18,5 cm, **ONE** size 2.5 Straight Forward Telescopes 0°, **ONE** diameter 1.9/2.1 mm, length 18 cm, auto-clavable, fiber optik light transmission incorporated, Telescope Bridge **ONE** Injection Cannula **ONE ONE** Adaptor from bronchoscope to any type of pediatric respiration equipment. **ONE** Plug for Ventilation Attachment of Bronchoscopes Injection Cannula for possitive pressure **ONE** assisted ventilation system, O.D. 2.7 mm, for use with bronchoscopes and tracheoscopes, with LUR-lock female fitting Bronchoscope Forceps alligator, single action jaws, **TWO** semi-flexible diameter 1 mm Suction Catheter, 7 Fr., with adaptor **ONE** Suction Catheter, 6 Fr., with adaptor **ONE** Suction Catheter, 5 Fr., with adaptor, **ONE** for use with bronchoscope tube size 6.5 **ONE** Irrigator and Aspirator, Atomizer with bulb. Length: 40 cm **ONE**

2. Specifications for Rigid Esophagoscopy Set

(One Set Only)

- ROBERTS-JESBERG Esophagoscope, oval, size 12 x 16, length 30 cm
- ROBERTS-JESBERG Esophagoscope, oval, size 10 x 14, length 30 cm
- ROBERTS-JESBERG Esophagoscope, oval, size 8 x 12, length 30 cm
- ROBERTS-JESBERG Esophagoscope, oval, size 7 x 9, length 30 cm
- Prismatic Light Deflector, autoclavable, with connection to fiber optic light cable
- Suction Tube, diameter 4 mm, working length 35 cm
- Suction Tube, diameter 2 mm, working length 35 cm
- Suction Tube, diameter 3 mm, working length 35 cm
- Suction Tube, diameter 4 mm, working length 60 cm
- Suction Tube, diameter 4 mm, working length 55 cm
- Suction Tube, diameter 4 mm, working length 45 cm
- Suction Tube, diameter 2 mm, working length 25 cm
- Suction Tube, with cut-off hole, diameter 3 mm, working length 45 cm
- Suction Tube, with cut-off hole, diameter 3 mm, working length 35 cm
- Suction Tube, with cut-off hole, diameter 5.5 mm, working length 35 cm
- Suction Tube, with cut-off hole, diameter 2 mm, working length 30 cm
- Suction Tube, with cut-off hole, diameter 3 mm, working length 30 cm
- Suction Tube, with rubber tip, straight, diameter 4 mm, working length 55 cm
- Suction Tube, with rubber tip, straight, diameter 4 mm, working length 45 cm
- Suction Tube, with rubber tip, straight, diameter 2 mm, working length 45 cm
- Suction Tube, with rubber tip, straight, diameter 2 mm, working length 35 cm
- Suction Tube, curved, with rubber tip, diameter 4 mm, working length 45 cm
- Suction Tube, with rubber tip, curved, diameter 2 mm, working length 35 cm
- Coagulating Suction Tube, insulated, with connector pin for unipolar coagulation, diameter 4 mm, working length 55 cm
- **Coagulating Suction Tube**, insulated, with connector pin for unipolar coagulation, diameter 3 mm, working length 35 cm
- Cotton Carrier, working length 60 cm
- Cotton Carrier, working length 55 cm
- Cotton Applicator, working length 35 cm
- Sponge Holder, working length 35 cm
- Sponge Holder, with spring handle, working length 55 cm
- Sponge Holder, with spring handle, working length 35 cm

3. Specifications for Advanced Laryngoscope Instrument Set

<u>S NO</u>	<u>Item With Spec</u>	Quantity
1.	Lindholm operating laryngoscope, length 15cm, with fiber optic light carrier	01
2.	Benjamin Slimline operating laryngoscope & subglottiscope for adults, length 17cm.	01
3.	Rudert Anterior commissure laryngoscope, medium, universal size, triangular spatula shaped, length 17cm, with fiber optic light carrier, length 16cm.	01
4.	Kleinsasser operating laryngoscope. For anterior commissure, length 18cm, with fiber optic light carrier	01
5.	Kleinsasser operating laryngoscope, medium, length 17cm.	01
6.	Kleinsasser operating laryngoscope, length 18cm, for anterior commissure, with fiber optic light carrier.	01
7.	Kleinsasser operating laryngoscope, length 17cm.	01
8.	Laryngoscope holder & chest support, rod with metal ring diameter 9cm, length 34cm.	02
9.	Benjamin –parson laryngoscope holder & chest support	02
10.	Extension for enlargement of opening angle of support rod for overweight patients.	02
11.	Clip for proximal illumination.	02
12.	Probe, straight, diameter 1mm.	02
13.	Probe, angled 45°.	02
14.	Sickle knife, curved, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
15.	Sickle knife, straight cutting, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
16.	Lancet knife, straight, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
17.	Needle straight, sharp, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
18.	Hook 90°, 1mm, sharp, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
19.	Hook 90°, 2mm, sharp, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
20.	Dissector, straight, ball end, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
21.	Elevator, slightly curved, blunt, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
22.	Elevator, slightly curved, sharp tip, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
23.	Elevator, 15° angled, sharp tip, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
24.	Curette, oval spoon, straight, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
25.	Curette, oval spoon, 35° angled, delicate, 3 to 1mm tapered shaft, total length 23cm.	02
26.	Universal handle, forceps shape, with 2 handle rings, length 23cm.	02
27.	Suction elevator, angular, with grip plate and cut off hole, working length 21cm, total length 23cm.	02

<u>S NO</u>	Item With Spec	Quantity
28.	Suction elevator, curved to right, with grip plate and cut off hole,	02
	working length 21cm, total length 23cm.	
29.	Fehland needle holder, angled 90° to right, working length 20cm.	02
30.	Fehland needle holder, angled 90° to left, working length 20cm.	02
31.	Kleinsasser needle holder, straight, working length 20cm.	02
32.	Micro forceps, straight, with 1mm cupped jaws, working length 20cm.	02
33.	Micro forceps, curved upwards, with 1mm cupped jaws, working length 20cm.	02
34.	Micro forceps, curved to right, with 1mm cupped jaws, working length 20cm.	02
35.	Micro forceps, curved to left, with 1mm cupped jaws, working length 20cm.	02
36.	Micro Grasping forceps, straight, serrated, working length 20cm.	02
37.	Micro Grasping forceps, curved upwards, serrated, working length 20cm.	02
38.	Micro Grasping forceps, curved to right, serrated, working length 20cm.	02
39.	Micro Grasping forceps, curved to left, serrated, working length 20cm.	02
40.	Shapsay-Peretti Micro grasping forceps, curved upwards to right, working length 20cm.	02
41.	Shapsay-Peretti Micro grasping forceps, curved upwards to left, working length 20cm.	02
42.	Micro scissors, straight, working length 20cm.	02
43.	Micro scissors, curved upwards, working length 20cm.	02
44.	Micro scissors, curved to right, working length 20cm.	02
45.	Micro scissors, curved to left, working length 20cm.	02
46.	Micro grasping forceps, straight, hollowed jaws, serrated tips, opens horizontally to right, working length 20cm.	02
47.	Micro alligator forceps, both jaws open vertically, with suction channel to remove laser vapors, working length 20cm.	02
48.	Suction tube with cut off hole, tip with central opening, outer diameter 1mm.	02
49.	Suction tube with cut off hole, tip with central opening, outer diameter 1.5mm.	02
50.	Suction tube with cut off hole, tip with central opening, outer diameter 2mm.	02
51.	Kleinsasser suction tube, outer diameter 2mm.	02
52.	Kleinsasser suction tube, outer diameter 2.5mm.	02
53.	Kleinsasser suction tube, outer diameter 3mm.	02
54.	Wire tray for cleaning, sterilization and storage	02