



Tender Enquiry No. ADMIN/Tender/ Orthopedics_Instruments /1/2013

Corrigendum for Orthopedics Instruments Tender

Page no / Clause no / Point no	Existing sentence	To be read as
Page no. 15 Point (B) 4. If all the equipment in the schedule is not quoted that bid will be out rightly rejected	All the equipment in the schedule if not quoted then complete sub-sets (i.e. mentioned in roman number format) should at least be quoted otherwise the tender will be rejected.
Page no. 20	Schedule A	Attached as Annexure-A
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Administrative Officer
AIIMS, Raipur

SCHEDULE A

Orthopaedic instruments for operation theatre

SPECIFICATION OF ORTHOPAEDIC SURGERY INSTRUMENT SET

1. The instruments quoted should be of high quality and standard.
2. The Instruments should be imported and of CE. Copy of the CE certificate.
3. **Instrument manufacture should have a track record of making surgical instruments for 10 years and has to submit user certificate of at least 5 years from reputed institutes.**
4. The instruments must be ISO certified and copy to be enclosed
5. Sterilisation Container **preferably with graphical cases** should be quoted along with Instrument set.
6. Sterilisation Container and Instruments should be **preferably** of the same parent company.
7. The instruments should remain sterile in the container and the container should be capable of being brought into the Operation Room without any essential packaging.

I.	<u>Basic Instruments</u>	Quantity
1	Hexagonal screw Driver with self holding sleeve 2.5mm tip	1
2	Small Hexagonal Screw Driver 2.5mm tip	1
3	Hexagonal screw Driver with T handle 3.5mm tip	1
4	Hexagonal screw driver with sleeve 2.5mm tip	1
5	Hexagonal screw Driver with self holding sleeve 3.5mm tip	1
6	Large hexagonal screw driver 3.5mm tip	1
7	Hexagonal screw driver with fiber/ equivalent handle, 3.5 mm tip	1
8	Screw driver shaft quick coupling end 2.5mm	1
9	Small plate bender (pair)	1
10	Plate bending plier (roller type)	1
11	Plate bending press	1
12	Screw driver shaft quick coupling end 3.5mm tip	1
13	Large plate bender(pair)	1
14	Plate bender for reconstruction plates	1
15	Small depth gauge	1

I.	<u>Basic Instruments</u>	Quantity
16	Large depth gauge	1
17	Large neutral and loaded drill guide	1
18	Counter sink with T - handle with 5.0mm head	1
19	Counter sink with T - handle with 8.0mm head	1
20	Small neutral and loaded drill guide	1
21	DCP Drill guide for 2.7mm screws	1
22	Counter sink with T handle -6 mm head	1
23	Counter sink with quick coupling End-5mm head	1
24	Counter sink with quick coupling End-6mm head	1
25	Quick coupler handle T-Type	1
26	Quick coupler adapter for drill bits	1
27	Tap sleeve -3.5mm	1
28	Counter sink quick coupling End 8.0mm head	1
29	Quick Coupling handle (fiber or equivalent)	1
30	Quick coupling tap handle-Long T Type	1
31	Tap sleeve -4.5mm	1
32	Double drill sleeve 1.5/1.1mm	1
33	Double drill sleeve 2.7/2.0mm	1
34	Drill and tap sleeve combined-2.5mm-3.5mm	1
35	Insert drill sleeve 2.5mm	1
36	Double Drill sleeve 2.0mm-1.5mm	1
37	Drill and tap sleeve combined-2.5mm-3.5mm	1
38	Drill and tap sleeve combined-3.2mm-6.5mm	1
39	Insert drill sleeve 3.2 mm	1
40	Pointed drill guide with 4.5mm tap sleeve & 3.2 mm drill sleeve	1
41	Screw removal forceps	1
42	Conical extraction reamer for broken IL Nails	1
43	Screw holding forceps	1
44	hollow mill	1
45	Conical extraction screws for damaged hexagonal head screws-3.5mm/4.5mm	5
46	Bending plier for plate 2.4mm to 4.0mm	1

II A	BONE Drill	
1	Universal bone drill with SS Gears	6
2	Micro open hand Drill with SS Gears	1
3	Micro hand Drill with SS Gears	1
4	Spare SS Chuck and key	2 each for each drill

II B	Wire instruments	
1	Wire twister circular	1
2	Wire tightener with two pegs	2
3	Guide wire introducer with four pegs	2
4	K wire bender	2
5	wire passer small/Large	2 each
6	Plier cum wire bender cum cutter-6"	6
7	Wire tractor	2
8	Wire passer medium	6
9	Plier cum wire bender	6
10	Plier cum wire bender cum cutter -9"	2
11	Plier cum wire bender cum cutter -11"	2
12	Flat nose plier	4
13	Wire tightener cum twister	2
14	Wire cutter -Double action length -250mm	2
15	Steinmann pin introducer with SS Chuck and key	2
16	Steinmann pin holder	6
17	Bone awl with eye	2
18	Bone tunnel borer	6
19	Reamer perthes 18.5cm	2
20	Tunnel borer with counter sink	2
21	Long forceps for twisting wire	4
22	Surface wire cutter light, heavy	1 each

III	BONE HOLDING INSTRUMENTS	
1	Reduction forceps serrated	1
2.	Holding Forceps for Circlage Wire	1 pair each
3	Self Centering Bone Holding Forceps(small ,medium and large)	4
4.	Reduction Forceps- Serrated – Speed Lock or equivalent	4
5.	Reduction Forceps- Pointed – Speed Lock or equivalent	2
6.	Circlage Wire Tightener	4
7.	Reduction Forceps- Serrated – Ratchet Lock	4

8.	Reduction Forceps- Pointed – Ratchet Lock	2
9.	Patella Bone Holding Forceps – Three Prong	2
10	Patella Bone Holding Forceps – Four Prong	2
11	Pelvic Reduction Forceps, Oblique, Small Length – 240mm, with Pointed Ball Tips, Speed Lock or equivalent	2
12.	Pelvic Reduction Forceps, Small for Screws Length – 200mm, use with 3.5mm and 4.5mm Cortical Screws	2
13	Pelvic Reduction Forceps, Large for Screws Length – 330mm, Speed Lock fixation with 4.5mm Cortical Screws	2
14	Pelvic Reduction Forceps, Oblique, Small Length – 190mm, with Pointed Ball Tips, Speed Lock or equivalent	2
15.	Pelvic Reduction Forceps, Length – 400mm, with Pointed Ball Tips, Speed Lock or equivalent	2
16.	Pelvic Reduction Forceps, Medium for Screws Length – 250mm, use with 3.5mm and 4.5mm Cortical Screws	2
17.	Pelvic Reduction Forceps with Angled Pointed Ball Tips, Length – 250mm, Speed Lock or equivalent	2
18.	Pelvic Reduction Forceps, long, with Pointed Ball Tips, Length – 400mm, Speed Lock or equivalent	2
19.	Fibula Holding Forceps, Straight – 210mm	2
20	Holding Forceps for Tibial Edge Fragment– 210mm	2
21	Self Centering Bone Holding Forceps - Soft or equivalent lock	2
22	Pelvic Reduction Forceps, long, with three Pointed Ball Tips, Length – 400mm, Speed Lock or equivalent	2
23	Fibula Holding Forceps, Curved – 210mm	2
24	Malleolar Forceps– 210mm	2
25	Reduction Forceps, Serrated Jaw- Softlock or equivalent	2
26.	Reduction Forceps, with Points- Softlock or equivalent	2
27.	Lane Bone Holding Forceps with Ratchet	2
28.	Burns Bone Holding Forceps	2
29.	Lowman Bone Clamp – For Forearms (Extra Small)	2
30.	Bone And Plate Holding Forceps	2
31	Lane Bone Holding Forceps without Ratchet	6
32.	Lowman bone clamp , small medium and Large 2 each	6
IV	Bone cutting instruments	
1.	bone cutting forceps - curved (Double Action) small , medium, large	12
2.	Bone nibbler- (small, medium, large,) straight and curved	2
3.	Tuder Edward type Bone Cutting Forceps	2

4.	Bone Nibbler-Angular (Double Action)	2
5.	Ampulation Saw	2
6.	Ampulation Saw- fibre/ equivalent Handle	2
7.	Bone file-Half Round- Pointed	2 each
8.	Chisels with fibre/ equivalent handle(5mm, 10mm)	2 each
9.	Osteotome with fibre/ equivalent handle-Curved and straight (5mm, 10mm)	2 each
10.	Finger Saw	2
11.	Bone file- Flat	2 each
12.	Gouge with fibre/ equivalent Handle -Curved 5mm,10mm	2 each
13.	Bruns Bone Currette with fibre/ equivalent Handle 5mm,10mm	4
14.	Bone Currette-Double Ended	4
V	Bone Hammers S.S	
1.	Bone Hammer -100 gms Approximately	1
2.	Bone Hammer -350 gms Approximately	1
3.	Bone Hammer -700 gms Approximately	1
4.	Bone Hammer -200 gms Approximately	1
5.	Bone Hammer -500 gms Approximately	1
VI	HOOKS, LEVERS & RETRACTORS	
1.	Bone Hook-Small	1
2.	Bone Hook-Large	2
3.	Skin Hook-Two Pronged	2
4.	Sharp Hook	1
5.	Bone Hook - Medium	2
6.	Skin Hook-Single Pronged	2
7.	Skin Hook- Three Pronged	2
8.	Lane's Bone Lever- Serrated	2
9.	Lane's Bone Lever- Plain-Small	2
10.	Bristow's periosteum elevator	2
11.	Lagenback Retractor- Medium	2
12.	Volkman's Retractor-Two Prong	2
13.	Lane's Bone Lever-plain-large	2
14.	Lagenback Retractor- Small	2
15.	Lagenback Retractor – Large	2
16.	Volkman's Retractor -Three Prong	2
17.	Volkman's Retractor - Four Prong	4
18.	Right Angle Retractor	1
19.	Initial incision Retractor with Weight* Chain	2

20.	Hohmann Retractor 5 mm Wide, Short Narrow Point, 160mm length	2
21.	Volkman's Retractor- Five Prong	2
22.	Double Hook Retractor	2
23.	Hohmann Retractor 6mm Wide, Short Narrow Point, 160mm Length	2
24.	Hohmann Refractor, 15 mmWide, 160mm Length	2
25.	Hohmann Retractor 8mm Wide, Short Narrow Tip, 220mrn Length	2
26.	Hohmann Retractor 18mm Wide, Long Narrow Tip, 235mm Length	2
27.	Hohmann Retractor 24mm Wide, With Tip, 270mrn Length	2
28.	Hohmann Retractor 70mm Wide, Narrow Tip, 240mm Length	2
29.	Hohmann Retractor 18mm Wide, short Narrow Tip, 235mm Length	2
30.	Hohmann. Retractor 22mm 'Wide, with Wide Tip, 250mm Length	2
31.	Hohmann Retractor 43mm Wide, Narrow Tip. 240mm Length	2
32.	Self Retaining Retractor - Small- 200mm Long	2
33.	Self Retractor -Medium 250mm Long	2
34.	Self Retaining Retractor - Extra Large - 350mm Long	2
35.	Gelpi Retactor - Medium - 245mm	4
36.	Periosteal Elevator-Straight	2
37.	Self Retaining Retractor-Large-300mm Long	2
38.	Gelpi Retractor-Small- 175mm	2
39.	Gelpi Retractor-Large-315mm	2
40.	Periosteal Elevator- Curved	1
41.	Square retractor for Minimally invasive THR	1
42.	Femoral Head elevator blade single prong L &R	1
43.	Femoral Head elevator double prong broad	1
44.	Femoral Head elevator double prong narrow	1
45.	Multipurpose retractor with 16 detachable blades	1
46.	Femoral Distractor	1
VII	INSTRUMENTS FOR KUNTSCHER NAILS	
1.	Bone Spreader	1
2.	K. Nail Setting Device	1
3.	K. Nail Measuring Gauge	2
4.	Guide Wire for K. Nail	1
5.	K Nail Driver	2
6.	K, Nail Extractor With Two Hooks	1
7.	Diamond Pointed Awl	1 each
8.	K. Nail Reamer 7mm,8mm,9mm,10mm,11mm,12mm,13mm	2 each
9.	Spare Hooks For K, Nail Extractor	1

10.	Slide hammer for K. Nail Extractor Set	1
VIII	Instruments for Forearm nailing	
1.	Locking Plier – Large	1
2.	Impactor for Square Nail	1
3.	Square Nail Extractor Hook	1
4.	Extractors Rod with Hammer for Locking Pier	1 each
5.	Square Nail Reamer 2mm, 2.5mm, 3mm, 3.5mm, 4.0mm	1 each
IX	INSTRUMENTS FOR HIP PROSTHESIS	
1.	Rasp for Austin Moore-Standard Stem	1
2.	Rasp for Austin Moore -Broad Stem	1
3.	Rasp For Thompson - Standard Stem	1
4.	Murphy Lane Bone Skid	1
5.	Rasp for Austin Moore -Narrow Stem	1
6.	Rasp for Austin Moore - Extra Long Stem	1
7.	Rasp For Thompson - Narrow Stem	1
8.	Moore Hollow Chisel	1
9.	Moore Hollow Chisel with Fibre Handle - Standard	1
10.	Judet Auger Extractor	1
11.	Impactor- Nylon Faced	1
12.	Extractor with Two Hooks	1
13.	Moore Hollow Chisel with Fibre Handle - Extra Large	1
14.	Measuring Gauge for Prosthesis	1
15.	Impactor - nylon Faced, Large Tip	1
16.	Spare Hook For Extractor	1
17.	Rasp with Tommy Bar for Bipolar Prosthesis	1
18.	Pencil Reamer - For Bipolar Prosthesis	1
19.	Tapered Reamer -For Bipolar Prosthesis	1
20.	Slotted Reamer -For Bipolar Prosthesis	1
21.	Bipolar Trial Stem S.S	1
22.	Trial Cup	1
23.	Trial Cup Holder	1
24.	Impactor - For Bipolar Prosthesis	1
25.	Hook for Extraction of Bipolar Stem	1
26.	Charnley's TH cup holder with pusher	1
27.	Charnley slotted reamer	1
28.	Charnley tapered reamer	1
29.	Charnley's retractor with weight and chain	1
30.	Charnley's pin retractor	3

31.	Charnley's cup gauge	1
32.	Charnley's Long curette-spoon, ring	1 each
33.	Acetabular reamer-43,45,47,49,51,53,55,57,59 with shaft	1 each
34.	Femoral rasp five sizes	1 each
X	INSTRUMENTS FOR PLASTER CUTTING	
1.	Plaster Saw Heavy Handle	1
2.	Plaster Saw Bergman	1
3.	Plaster Shear- Seller's	1
4.	Plaster shear -Gay's	1
5.	Plaster Bender	1
6.	Plaster Saw Angle	1
7.	Plaster Spreader	1
8.	Plaster Shear - Stille's	5
9.	Bandage Cutting Scissor	1
10.	Plaster Opener - Daw's	
XI	INSTRUMENTS FOR STAPLES	
1.	Sterling Tubes for Stertization of Wires, Nails, Fins & Drill Bits	1
2.	Coventry Staple Inserter	1
3.	Coventry Staple Extractor	1
4.	U Staple Starter	1
5.	Coventary Staple Impactor	1
6.	U Staple Inserter	1
7.	U Staple Extractor	1
XII	SMALL CANNULATED INSTRUMENT	
1.	Cannulated Drill Bit 3.5mm/1.35mm, Length 130mm Plain Shank	1
2.	Cannulated Tap 4.0 mm Quick coupling,	1
3.	Drill Guide with stop 3.5mm/2.7mm with two inserts	1
4.	Cannulated Drill bit 2.7mm/ 1.35mm, Length 130mm Plain Shank	1
5.	Cannulated Counter Sink quick coupling. 5.0mm	1
6.	Double Drill Sleeve 2.7/1.25mm	1
7.	Cannulated Hexagonal Screw Driver - 2.5mm Tip	1
8.	Direct Measuring Device-S.S	1
9.	Holding Clip	1
10.	Drill and tap Sleeve Combined 2.5/3.5mm	1
11.	Cannulated Drill Bit 3.5/135mm Length 160mm Q.C. End	1
12.	Stylet 1,25mm	1
13.	Cannulated Quick Coupling Tap Handle with Fiber Handle	1

14.	Cannulated Drill Bit 2.7/135mm Length 160mm Q.C. End	1
15.	Cannulated Tap 4.0mm with T- Handle	5 each
XIII	DRILL BITS (Plain)	
1.	1.5mm/2.,2mm/2.5mm/3.2mm/3.5mm/4.5m up to 5 inch length	5 each
2.	Above 5 Inch length	5 each
XIV	DRILL BITS (Quick Coupling End)	
1.	1.5mm/2.2mm/2.5mm/3.2mm/3.5mm/4.5m up to 5 inch length	5 each
2.	1.5mm/2.2mm/2.5mm/3.2mm/3.5mm/4.5m up to 5 inch length	4 each
XV	INTERLOCKING DRILL BITS (PLAIN & QUICK COUPLING	
1.	DRILL BIT (CANNULATED DRILL BIT PLAIN) in 3.2m & 4.0m	4 each
2.	DRILL BIT (CANNULATED DRILL BIT (QUICK COUPLING END) in all size	4 each
3.	BONE TAP (T. HANDLE & QUIICK COUPLING END) in all size	4 each
4.	BONE TAP CANNULATED in all size	4 each
XVI	SCREW DRIVER	
1	in 4.5mm/3.5mm	1 each
XVII	BOX SPANNER	
1.	Screw Cannulated 3.5m/4.5mm	1
2.	Box Spanner 8mm/11 mm handle, Length 5"	1
3.	Cannulated Box Spanner 8/11 mm	2
XVIII	Humerus interlocking Instruments	
1.	Humerus Interlocking jig with drill sleeve	1
2.	Humerus awl	1
3.	Nail adapter with tommy bar	1
4.	Nail impactor	1
5.	Nail impactor extractor bar with hammer	1
6.	Drill bit 2mmX200mm	1
7.	Depth Gauge	1
8.	Screw driver for 2.9mm locking bolt	1
9.	Box spanner	1

SCHEDULE B

Image Intensifier:

C-ARM SYSTEM

Brief description- C-ARM with LCD panel & with 1K X 1K CCD Camera and 9” Image Intensifier.

- The unit should be based on digital technology
- Reliable and easy to use.
- The movements of the c-arm should be smooth having very simple positioning.

X-RAY GENERATOR:

- ✓ *High Frequency (70 KHz) X-Ray Generator with minimum power output 12KW should be provided.*
- ✓ *Following modes should be provided:*
 - Radiography
 - Fluoroscopy: continuous, single pulse, multi pulse
- ✓ *KV Range (Rad./Fluoro): 40 to 110KV.*
- ✓ *Radiographic mA Range: more than 20mA*
- ✓ *Fluoroscopy mA output: 0.1-20 mA (Continuous mode)
: 0.1-20 (Pulse mode)*
- ✓ *mAs output: Up to 80mAs or more*

X-RAY TUBE:

- ✓ *Dual focus Rotating Anode X-Ray Tube of focal spot 0.3mm² (small) & 0.6mm² (large) to be provided.*
- ✓ *Anode heat storage capacity should be more than 300KHU.*
- ✓ *Motorized Collimator should be provided.*

LCD CONTROL PANEL:

- *Multiparameter LCD Display*
- *APR (Anatomical Programming).*
- *Technique selection: Fluoro & Rad. Mode Selection.*
- *An inbuilt Radiographic Timer enables to select upto 80mAs in steps for Radiography should be provided.*
- *Fluoroscopy timer: 5 minutes cumulative Timer with Buzzer should be provided.*
- *Thermal Safety cut off should be provided*
- *Self Diagnostic: following error indication display should be shown on LCD display in character form*
 - KV interlock
 - Filament interlock
 - Thermal interlock
- ✓ *Automatic brightness control should be provided to operate the machine in automatic mode for hands free operation.*

STAND:

- ✓ *Motorized Up/Down movement (Noise free Actuator movement): A least 490mm*
- ✓ *Horizontal Movement: 200 mm.*
- ✓ *Arc Orbital: 90° + 30° (120°)*
- ✓ *Wig wag: ± 10° (25°)*
- ✓ *Rotation: ± 180°*
- ✓ *Free Space: 750mm or more*
- ✓ *Focus Screen Distance: 970mm or more*

- ✓ Arc Depth: 60cm or more
- ✓ Locks: Locks for all the movements.
- ✓ Foot lock: Control Stand foot lock.

IMAGE INTENSIFIER TV SYSTEM:

- ✓ 9 Inches or more, Triple Field Image Intensifier should be provided.
- ✓ CCD Camera with a progressive scan sensor of 2/3" of 1K x1K Medical Grade
- ✓ The acquisition should be made at 14 bits.
- ✓ Resolution to use the full dynamic range of CCD Camera.
- ✓ **MEMORY SYSTEM:**
PC based memory system with the following features should be provided:-
 - Image processing software with Real time image capturing, storage, and display in 1kX1k format
 - Fluoroscopy (CINE) upto 30 FPS with real time recording on Hard Disk Drive.
 - More than 20000 image storage capacity in 1kX1K format
 - Dicom 3.0 Ready
 - Dicom CD/DVD
 - Connectivity with PACS and HIS
 - Length and angle Measurements with Annotation
 - Pre Programming for Image setting for different operating Modes.
 - Image Flipping and Image rotation
 - WW/WL adjustments
 - Recursive Filters for image smoothening
 - Programmable Motion Detection facility
 - Gamma Curve adjustments for optimum image quality.
 - Image Zoom with Pan
 - Image Inversion

MONITORS AND TROLLEY:

- ✓ 2 Nos. 17"LCD high resolution monitors along with a trolley should have following preferable features:
Foldable monitors.
- ✓ Actuator assisted up/down movement of monitors to facilitate viewing of images at most convenient eye level positions
- ✓ Specially designed integrated keyboard having feather touch keys and touch pad is provided instead of double unit keyboard and mouse
- ✓ 5 inch wheels for better mobility with kick stop provision in two wheels for parking stability.

POWER SUPPLY REQUIREMENT:

- ✓ Single Phase, 230 Volts, AC, 15 Amps, 50 Hz, $\pm 10\%$ Regulation. Independent earthing required on the wall socket in the Room.
- ✓ Voltage Stabilizer of suitable rating should be provided.

Other Requirements:

The company should be european **CE and USFDA Certified.**

- ✓ The unit should be approved by AERB.
- ✓ The company should have a local Service center.

SCHEDULE C

Electric drill system

Electric drill, saw and reamer system for Orthopedics

1. Driving Unit: Motor unit with MCB, foot control, flexible shaft, stand and base, tool kit with a special container.
2. Universal drill hand piece: Autoclavable, pistol grip, stainless steel Jacob chuck, maximum speed 1200 rpm cannulated
3. Sagittal saw hand piece: Pistol grip, blades of different sizes which can be set at various angles.
4. Flexible reaming hand piece: Pistol grip, AO type quick coupling, cannulated. Adaptors for Jacob, trinkle, synthes, Hudson and zimmer ends
5. Flexible reamers shaft and heads: Atleast 6 to 14 mm at increments of 0.5 mm. Fixed heads of 6,7,abd 8 mm shaft, cannulated with guide wires 100 cm , plain, olive tipped and changing Teflon sleeve.
6. Reciprocating saw: pistol grip, at least 2 types of blade and 13000 reciprocations /minute
7. Driving Unit: Motor unit with MCB, foot control, flexible shaft, stand and base, tool kit with a special container.
8. Universal drill hand piece: Autoclavable, pistol grip, stainless steel Jacob chuck, maximum speed 1200 rpm cannulated
9. Sagittal saw hand piece: Pistol grip, blades of different sizes which can be set at various angles.
10. Flexible reaming hand piece: Pistol grip, AO type quick coupling, cannulated. Adaptors for Jacob, trinkle, synthes, Hudson and zimmer ends
11. Flexible reamers shaft and heads: At least 6 to 14 mm at increments of 0.5 mm. Fixed heads of 6,7,abd 8 mm shaft, cannulated with guide wires 100 cm , plain, olive tipped and changing Teflon sleeve.
12. Reciprocating saw: pistol grip, at least 2 types of blade and 13000 reciprocations /minute

SCHEDULE D

Pneumatic automatic Tourniquets

Specifications:

1. Should be light weight, portable, compact with tilting stand.
2. Should be microprocessor controlled with latest digital technology.
3. Should have built in air pump for safe and leak free inflation.
4. Should have **LCD display of split screen for each cuff with** indicators of inflate, deflate.
5. Should work on main ac power and internal battery with back up of 8 hours.
6. It should have countdown timer with alarm.
7. Should have audio-visual alarm to detect high leak and disconnection, pressure deviation and low battery indicator.
8. Cuff pressure should follow **the latest LOP technology**.
9. Automatic pressure regulation with -1 to +10 mm Hg.
10. Alarm time with 0 – 250 minutes, with adjustment of 1 minute steps.
11. Three different sizes of imported quality material should be provided
12. Minimum warranty should be of one year.
13. The company should be WHO-GMP certified with ISO

SCHEDULE E

Pulse lavage system

Technical specifications of pulsatile lavage system

- 1.1 Should have a suction and irrigation hand piece and a dual lumen suction and irrigation tip **having tip retaining technology.**
- 1.2 Equipped with a motor driving a pump to create a pulsating fluid flow
- 1.3 Control mechanism for varying the pulsation frequency independently of the fluid pressure or rate of flow.
- 1.4 Separate pulsatile lavage, irrigation, and aspiration functions should be provided.