

List of equipments for the department of Orthopaedics

Sl. No.	Name of Equipments
1	Arthroscope complete set
2	Hand surgery set with surgical instruments & implants with accessories
3	Instrument set for various orthopaedics surgery
4	Power drill machine with extra hand set
5	Ortho OT Table
6	C Arm Image Intensifier
7	Ortho Navigation system
8	Horizontal cylindrical pressure sterilizer

SCHEDULE-V

QUALITATIVE REQUIREMENTS (QRS) FOR ARTHROSCOPE COMPLETE QTY- 02 NOS. (WITH ITS COMPLIANCE STATEMENT TO BE GIVEN BY TENDERER).

1. Nomenclature of Item with Year & Model No: _____
2. Country of Origin: _____
3. Tenderers are requested to give Compliance of each Specification whether equipment being offered by them is complying with Specification or otherwise.

TECHNICAL SPECIFICATION

S/No	Technical Specification/QRS	Complied	Not Complied	Page No at which this Tech details attached.
1	For Knee Arthroscopy including ACL & PCL set with Full HD Camera System, Shaver and Pump Systems including Instrument for Shoulder Arthroscopy, Hip Arthroscopy, Small Joint and Data management System.			
2	Arthroscope: Autoclavable			
	Qty one each.			
(a)	Wide angle Forward-Oblique and lateral scope.			
(b)	Field of view :			
(c)	Angle of View : 30° and 70°			
(d)	Diameter 4 mm			
(e)	Length 16 cm to 18 cm			
(f)	Fibre Optic light transmission incorporated			
(g)	Standard ocular window for coupling camera head			
(h)	Scratch resistance sapphire quoted tip lens			
(i)	Rod lens system for optimum brightness, contrast and definition.			
(j)	Arthroscope Sheath, rotatable			
	Qty-1			
(k)	Diameter 5.5 to 6 mm			
(l)	Working length 12 cm			
(m)	With 2 rotatable stopcocks			
(n)	Autoclavable , for use with telescope 30° and 70°.			
(o)	Semi Sharp Obturator			
	Qty-1			
(p)	Use with arthroscopy sheath, working length 12 cm			
(q)	Hook Probe Graduated			
	Qty-1			

3	CAMERA SYSTEM			
(a)	Specification for Full HD Digital Camera			1
(i)	The system should be truly Digital Full HDTV Endoscopic Video Camera. The system should qualify all the essential criteria for full HDTV system.			
(ii)	Maximum resolution of 1920 X 1080 Pixels			
(iii)	Progressive scan			
(iv)	Consistent use of 16:9 format for input & Output to guarantee genuine HDTV.			
(v)	The system should have the following Features.			
(vi)	CCD sensing chip should optimize image quality & Digital Source Sampling for maximizing hi-fidelity image transmission.			
(vii)	Optimizes to Any size : The System should have optical zoom to enhance the quality of image size & cross specialty standardization of the camera system, regardless of telescope used.			
(viii)	The system should automatically optimize all settings. The system should be ready-to-use as soon as it is connected to the camera control unit.			
(ix)	The system should be menu driven, thus allowing the surgeon to program the camera head functions as per surgical need & requirement			
(x)	The system should have the following Digital O/Ps			
(xi)	HDTV signal to DVI-D Socket			
(xii)	Digital SDI Signal			
(xiii)	DV/USB-For Digital recording			
4	<u>Technical Specifications</u>			
(i)	Image Sensor	3 X 1/3" CCD-Chip		
(ii)	Pixels	1920 (H) x 1080 (V) Pixels per chip		
(iii)	Camera Head Weight	150-250 gms		
(iv)	AGC :	Micro processor Controlled 55-65 dB		
(v)	Lens :	Optical Zoom Lens with desirable range F-12-35 mm		

(vi)	Video output	Composite signal to BNC Socket S-Video signal to 4-pin Mini DIN Socket (2x) RGB Signal. HDTV Signal to DVI-D socket (2x). Digital SDI Signal to BNC socket DV signal to DV socket			
(viii)	Certified to : IEC-601-1, CE according to MDD, protection class I/CF.				
5	TFT Flat Screen Monitor.				
(i)	The system should have	Qty-1			
(ii)	Full HDTV medical grade monitor size : 26 inch				
(iii)	To accept DVI-D, DV and SDI video inputs				
(iv)	Compact & Lightweight design				
(v)	Drip water protected, dustproof housing.				
(vi)	Screen Diagonal 26 inch				
(vii)	Resolution 1920 X 1080p				
6	XENON LIGHT SOURCE AND LIGHT CABLE				
(a)	<u>Specifications</u>				
(i)	High Intensity Xenon light source with spare xenon lamp.				
(b)	<u>Special Features</u>				
(i)	High light intensity with 300 watt Xenon lamp				
(ii)	High colour temperature-more than 6000 K corresponds to brightness of sunlight resulting in high visual and photographic clarity for colour rendition.				
(iii)	Monitoring of lamp function				
(c)	<u>Technical Specifications</u>				
(i)	Lamp Type	: Xenon lamp 300 watt			
(ii)	Colour temperature	: Approx 6000 K			
(iii)	Light outlets	: 1			
(iv)	Light intensity adjustment	: Continuously adjustable from 0 to 100% manually : Qty-1			
7	FIBRE OPTIC CABLE				
(a)	<u>Specifications</u>				
(i)	Should be 3.5 mm and length : 230 Cm	Qty -2.			

(b)	Specifications of Arthroscopy Shaver				
(i)	High speed shaver system with :				
(ii)	Stable torque throughout entire speed range				
(iii)	Optionally available high speed shaver hand pieces with rotational speed ranging from 1000 rpm to 15000 rpm				
(iv)	Oscillation of shaver within rotation speed from 500 rpm to 3000 rpm				
(v)	Choice between hand controls, control via footswitch or control from the console via LCD touch screen.				
(vi)	Drill and saw hand piece can be used.				
(vii)	Light weight handle with switches for				
(viii)	selection with rotation (clock wise anti clock wise and oscillation)				
(ix)	Control to increase or decrease the rotation speed.				
(x)	Suction control , on the handle itself				
(xi)	High' speed hand piece with not more than 8000 rpm				
(xii)	Autoclavable				
(xiii)	Unit should be supplied with foot switch and Shaver handle.	Qty -1			
(xiv)	Specification for Shaver blades preferably reusable	Qty-1 each.			
(xv)	Aggressive cutter 4.5 mm, reusable				
(xvi)	Full radius Resector 4.5 mm, reusable				
(xvii)	Curved aggressive full radius resector, distal tip curved 15 deg up to 4.2 mm, reusable.				
(xviii)	Round Burr 5.5 mm, reusable				
(xix)	Finnish barrel burr 5.5 mm, reusable				
8	<u>FLUD PUMP MANAGEMENT SYSTEM</u>				
(i)	Irrigation pressure and flow rate are electronically controlled.				
(ii)	Flow rate 1-2 lts/min				
(iii)	Display of operating parameters set points and actual performance data.				
(iv)	The unit should be compact with front panel display of critical parameters like flow-reset and actual with audible alarm system in case of overpressure.				
(v)	Unit should be supplied with foot switch	Qty-1			

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(vi)	Preferably Reusable tubing set	Qty-2		
9	HAND INSTRUMENTS			
(i)	All hand instruments should have one piece out shaft with excellent control over the cutting process			
(ii)	Punches			
(iii)	All purpose, low profile not more than 3 mm enables access to structures in narrow joint areas with large aperture angle allows efficient resection. Should have an ergonomic handle for controlled, measured and non tiring cutting.			
(A)	Qty-1 each			
(i)	Straight cutting width 2.7 mm, shaft diameter 3.5 mm Working length 13 cm			
(ii)	Upturned 15 deg. Cutting width 2.7 mm, shaft diameter 3.5 mm, working length 13cm			
(iii)	Jaws curved 30 deg left Cutting width 2.7 mm, shaft diameter 3.5 mm, working length 13cm			
(iv)	Jaws curved 30 deg right Cutting width 2.7 mm, shaft diameter 3.5 mm, working length 13cm			
(v)	Jaws curved 90 deg right Cutting width 2.7 mm, shaft diameter 3.5 mm, working length 13cm			
(vi)	Jaws curved 90 deg right Cutting width 2.7 mm, shaft diameter 3.5 mm, working length 13cm			
(B)	Qty-1 each			
(i)	Straight Cutting width 3.4 mm, shaft diameter 3.5 mm, working length 13 cm.			
(ii)	Upturned 15 deg Cutting width 3.4 mm, shaft diameter 3.5 mm, working length 13 cm.			
(iii)	Jaws curved 30 deg left Cutting width 3.4 mm, shaft diameter 3.5 mm, working length 13 cm.			
(iv)	Jaws curved 30 deg right Cutting width 3.4 mm, shaft diameter 3.5 mm, working length 13 cm			
(v)	Jaws curved 90 deg right Cutting width 3.4 mm, shaft diameter 3.5mm, working length 13 cm			
(vi)	Jaws curved 90 deg right Cutting width 3.4mm, shaft diameter 3.5 mm, working length 13 cm.			
(C)	Scissor Punch, Qty-1 each			
(i)	Straight Cutting width 1.5 mm, shaft diameter 3.5mm, working length 23 cm;			
(ii)	Shaft curved left Straight Cutting width 1.5 mm, shaft diameter 3.5mm, working length 23cm;			



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(iii)	Shaft curved right Straight Cutting width 1.5mm, shaft diameter 3.5mm, working length 23 cm			
(D)	Grasper	Qty-1 each		
(i)	Straight spoon shaped jaws Shaft diameter 3.5 mm, Working length 13cm;			
(ii)	Aggressive foreign body grasper Shaft diameter 3.5mm, Working length 13cm;			
(iii)	30 deg upturned spoon shaped Shaft diameter 3.5 mm, Working length 13cm;			
(E)	Rasp and Curette;			
(i)	Oval curette curved 10 deg, length 13 cm			
(ii)	Oval curette curved 30 deg, length 13cm			
(iii)	Rasp straight, narrow, fine working length 13 cm			
(iv)	Rasp narrow curved, Working length 13 cm			
10	Specification of ACL Set.			
(i)	Instruments set for bone tendon bone as for soft tissues			
(ii)	Tribal tunnel Guide Anterior Cruciate Ligament	Qty-1		
(iii)	Variable angle, tunnel angle between 40 deg and 60 deg.			
(iv)	With specially designed tip for viewing the exit of the target wire from above before placement			
(v)	With special fixation mechanism for secure and continuous fixation of the guide pin in every position			
(vi)	The guide should have stable construction which prevents winding and torsion of the guide and provides extremely high target precision			
(vii)	Design should be sturdy allows absolutely no area for play between angles			
11	Tendon Stripes 6-7 mm			
(i)	Drill Wire	Qty -10		
(ii)	Diameter 2.4 mm			
(iii)	Length 32 cm, pyramidal shape			
12	Headed Bone Drill	Qty- 1 each		
(i)	Diameter 4.5,7,8,9,10 and 11 mm			
(ii)	Should have marking			
(iii)	Cannulated, for use with drilling wire, diameter 2.4 mm			
(iv)	Tendon Striper:			
(v)	Diameter 7 mm			
(vi)	Length 30 cm			



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(vii)	Should have length marks on the stripper for measurement of the length of the graft			
13	Tendon thickness Tester Qty- 1			
(i)	For determination of tendon thickness from 6mm to 10.5 mm in 0.5 mm increments			
(ii)	Should provide precise thickness measurement with a flap mechanism to measure the graft when it is tensed on the graft board			
(iii)	No threading through the tendon or the bone block should be required			
14	Femoral tunnel Guide, Anterior Cruciate Ligament Should consist of Qty-1			
15	Handle Qty-1			
16	Attachments for 4,5,6,7,8 mm offset Qty-1			
17	Curette, oval, large, curved 10 deg, length 13 cm Qty-1			
18	Rasp narrow curved, fine serration , length 13 cm Qty-1			
19	Tendon hook Qty-1			
20	Tendon Board for cleaning and preparing the graft Qty-1			
21	Graduated scackle for measurement of the graft			
22	Facility for preparation and initial tensioning of the graft.			
23	Marking for the determination of the graft portion in the femoral tunnel intraarticular and tibial tunnel			
24	Including a retainer for femoral fixation button			
(a)	Thread Clip Qty-1			
(b)	Length Gauge Qty-1			
(c)	Graduated			
(d)	Length 23 cm			
25	Thread Hook Qty-1			
26	Drilling wire with eye Qty-5			
(a)	Diameter 2.4 mm			
(b)	Length 38 cm, spiral-shaped polishing			
27	Specifications of PCL Instruments			
(a)	Tibial target guide for PCL Qty-1			
(b)	Femoral PCL aimer, graduated, length 14.5 cm Qty-1			

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(c)	Awl for PCI, 1.5 mm dia 4mm, length 20 cm			
28	Raspatory, crescent shape, length 13 cm Qty-1			
29	Blunt spoon for PCL with T shaped handle Qty-1			
30	Suture retriever for PCL with T shaped handle Qty-1			
31	<u>Instruments for meniscus repair</u> ✓			
(a)	inside techniques of meniscus repair for posterior horn area of lateral and medial meniscus. Suture material used with the set should be monofilament 2-0 to 2			
(b)	Handle for suture attachments			
(c)	Wheel attachment to roll suture			
(d)	Suture attachment straight, hook shaped, length 13 cm			
(e)	Suture attachment angled 180 deg right, length 13 cm			
(f)	Suture attachment angled 180 deg left, length 13 cm			
(g)	Suture attachment angled 360 deg right, length 13 cm			
(h)	Suture attachment angled 20 deg upward, length 13 cm			
(i)	Suture attachment angled 20 deg upward, length 14 cm			
(j)	Cannula to use with suture attachment			
(k)	Obturator Cannula			
(l)	Knot pusher			
(m)	Suture curette, for retinaculum suture with handle			
(n)	Thread grasping forceps			
32	<u>Mobile Video Trolley</u> ✓			
(a)	Mobile video trolley rides in 4 antistatic dual wheels.			
(b)	Wheel diameter not less than 12 cm			
(c)	Two equipped with locking breaks			
(d)	One camera head mount			


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(e)	Integrated power board provides connection to all units.			
(f)	Channel inside the stands to avoid hanging of the cables.			
(g)	One drawer with lock			
(h)	Should have inbuilt arm for 26 inch TFT monitor			
(i)	One adjustable swivel arm for monitor can be mounted either on left or on right stand for touch screen			
33	<u>Arthroscopy Leg holder</u>			
(a)	Arthroscopy Leg holder, with Qty-1			
(b)	Clamp 25 mm and 30 mm			
(c)	Cushion			
(d)	Strip for tightening			
34	<u>Data Management System</u>			
(a)	The System Should have			
(b)	Digital storage if still images, Video sequences & Audio Files in full HD format.			
(c)	Sterile, Eargonomic operation via touch screen, camera head buttons & foot switch.			
(d)	Efficient archiving on DVD or CD-ROM, both multi-session and multi patient.			
(e)	Should be able to record full HD format			
(f)	Automatic creation of standard reports			
(g)	Computer and monitor to be used in OR should be certified			
(h)	All required accessories should be supplied with the system			
(i)	15" touch screen should be supplied with the system			
(j)	The unit should be compact and should be medical grade computer			
35	<u>Shoulder Arthroscopy instruments</u>			
(a)	Cannula system for Shoulder Arthroscopy			
(b)	Diameter not more than 8.25 m working not less than 70 mm preferably with reusable metal cannulas and transparent plastic cannulas.			


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(c)	The system should be supplied with the following items for an optimum control of the direction and position of the portal under vision. The system provides a portal to the joint by merely dilating the soft tissue without injuring.			
(d)	Six Positioning needle			
(e)	Six Obturator for positioning needle			
(f)	Six guide wire diameter 0.9mm			
(g)	One Cannulated dilator			
(h)	One handle for dilator			
(i)	Two housing for use with metal and transparent cannula			
(j)	Ten set of gaskets, double flap to avoid intra articular pressure			
(k)	One handle for introducing cannula			
(l)	One obturator for cannula			
(m)	Two metal cannula, reusable			
36	Ten Transparent Cannula, Diameter not more than 8.25 mm, Qty -10 Working length not less than 70 mm			
(a)	Should be compatible with obturator and introducer			
37	Changing rod, length 35 cm Qty -1			
38	Knot pusher Qty-1			
39	Suture retrieval forceps Qty-1			
40	Punch, Working length 18 cm Qty-1			
41	Hook Scissors, Working length 18 cm Qty-1			
42	Grasping Forceps, Working length 18 cm Qty-1			
43	Crochet hook, Working length 15 cm Qty-1			
44	Suturing instruments for Rotator Cuff, the system should consist of Qty-1 each			
45	Handle			
(a)	Wheel attachment for suture size 1-2 mono. and multifilament			
(b)	Suture attachment straight, distal tip curved, 7 mm in height			
(c)	Suture attachment straight, distal tip curved like hook, not less than 8.7 mm in height.			


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(d)	Suture attachment straight, distal tip curved like hook, not less than 10 mm in height.			
(e)	Suture attachment angled 30 deg to the right, not less than 8 mm in height.			
(f)	Suture attachment angle 30 deg to left, not less than 8 mm in height			
(g)	Hook and retractor graduated , Diameter 3.5 mm, working length 18 cm, length of hook 3cm Qty-1			
(h)	Crotche hook			
(i)	Threaded Drill for preparation of tunnel for anchor Qty-1			
(j)	Glenoid drill guide Qty-1			
(k)	Suture shuttle instrument curved downward, tip opens downward Qty-1			
(l)	Rap working length 7cm Shaft diameter 5.5mm			
(m)	For Glenoid			
(n)	For SLAP			
(o)	Elevator working length 17 cm Shaft diameter 6mm			
(p)	30 deg curved			
(q)	15 deg curved			
46	Hip Arthroscopy Set ✓			Ⓟ
(a)	<u>Arthroscope : Autoclavable</u> Qty-1			
(b)	Wide angle Forward-Oblique and lateral scope			
(c)	Field of view :			
(d)	Angle of View : 30° and 70°			
(e)	Diameter 4mm			
(f)	Length 16 cm to 18 cm			
(g)	Fibre Optic light transmission incorporated			
(h)	Standard ocular widow for coupling camera head			
(i)	Scratch resistance sapphire quoted tip lens			
(j)	Rod lens system for optimum, brightness, contrast and definition			
47	Arthroscope Sheath. Quick Coupling One			
(a)	Diameter 5.5 mm			
(b)	Working length 12 cm			
(c)	With 2 rotatable stopcocks			

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(d)	Autoclavable, for use with telescope 30° and 70°			
(e)	Blunt obturator, Autoclavable : for use with arthroscope sheath diameter 5.5 working length 12 cm	One		
(f)	Handle with cannuated obturator for use with arthroscopy sheath	One		
(g)	Hook and Retractor	One		
(h)	Straight, graduated, diameter 3.5 mm, working length 8.5cm, length of hook 2mm			
(i)	Shaft curved 30 deg, graduated, diameter 3.5 mm, working length 8.5 cm, and length of hook 2 mm			
(j)	Shaft curved 70 deg, graduated diameter e.5mm, working length 8.5 cm, and length of hook 2mm			
48	Working instruments			
(a)	Positioning needle with stylet, dia 2.1 mm, length more than 20 cm.			
(b)	Guide wire, 1.5 mm, length not less than 40 cm			
(c)	Cannulated dialator for use with guide wire, length nit less than 30 cm			
49	Set of working Cannula			
(a)	Threaded cannual, transparent, inner dia not less than 8 mm, working length not less than 90 mm.			
(b)	Handle for cannula			
(c)	Cannulated obturator for use with handle			
(d)	Housing for gasket			
(e)	Set of gaskets for housing			
(f)	Punch, jaws curved 15 deg up, working length 20 cm, cutting width 3.4 mm			
(g)	Punch shaft curved 15 deg up, working length 20 cm, cutting width 3.4 mm			
50	Grasper, aggressive, working length wo cm.			
(a)	Currette curved upto 20 deg.			
(b)	Knife, curved, sharp double ended, working length 20 cm			
(c)	Aimer for portal placement			
(d)	Aimer with attachment for bullet			
(e)	Bullet short, 10.5 cm			

(f)	Bullet long 14.5 cm			
51	<u>Instruments for small joint</u>	x	(b)	✓
(a)	Small Joint Arthroscope			
(b)	Wide angle Forward-Oblique scope			
(c)	Field of view			
(d)	Angle of View : 30 °			
(e)	Diameter 2.4 mm			
(f)	Length not more than 10 cm			
(g)	Fibre Optic light transmission incorporated.			
(h)	Standard ocular window for coupling camera head			
(i)	Scratch resistance sapphire coated tip lens			
(j)	Rod lens system for optimum brightness, contrast and definition			
52	Arthroscope Sheath, rotatable			
(a)	Diameter 3.5 mm			
(b)	Working length 6-7 cm			
(c)	With 2 rotatable stopcocks			
(d)	Autoclavable , for use with telescope 30° and 70°			
(e)	Blunt obturator,	Qty-1		
(f)	Use with arthroscopy sheath			
(g)	Instruments for Small Joint	Qty-1 each		
(h)	Punch, straight, dia 2.3 mm, length 10 cm			
(i)	Punch, 15 deg upward angled, dia 2 mm, length 10 cm			
(j)	Biopsy, Forceps, spoon shaped jaws, dia 2.3 mm, length 10 cm.			
(k)	Grasping forceps, dia 2.3 mm, length 10 cm.			
(l)	Hook retractor			
(m)	System must be having two years standard warranty and next five years CMC price must be given			
(n)	System must be FDA or CE, ISO Certified.			


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Hand Surgery Set with Surgical Instruments & Implants along with Standard Set of Accessories :

Radius plates should be available in different designs to match proved treatment concepts. All plates should be finished with the surface coating. To facilitate identification, all palmar plates should have been marked "P", dorsal plates "D" and dorsolateral plates "DL".

The latest generation of Smart Drive screws should provides both standard and locking screws with double threads for the first time. All screws should be equipped with atraumatic screw tip.

Specifications :

- Anatomical plate geometry
- Rounded atraumatic plate contour
- marLock locking
- Angulation within a range of +/- 15°
- Multiply releasable and lockable
- Locking even without "heel piece"
- 15% more fatigue resistance
- Smooth surface
- Risk of contact welding is minimized
- Atraumatic screw tip
- Atraumatic screw head
- Double, self-tapping thread
- T8 with self-retaining function

The following plate types should be available :

This plate complies should present industrial standard and complements the system with regard to economic aspects.

Based on the classic palmar treatment concept, the P4 exhibits unprecedented product should features in this category for the first time.

A watershed-line plate of the latest generation.

Anatomically pre-shaped plates for the dorsolateral treatment of radius and ulna.

The system is complemented by anatomically designed plates for dorsal treatment.

Should be supplied with the following instruments :

NARROW, PALMAR, L43/RT/TI	6
NARROW, PALMAR, L43/LT/TI	6
WIDE, PALMAR, L52/RT/TI	3
WIDE, PALMAR, L52/LT/TI	3
WAVE, NARROW, PALMAR, L43/RT/TI	6
WAVE, NARROW, PALMAR, L43/LT/TI	6
WAVE, NARROW, PALMAR, L52/RT/TI	3
WAVE, NARROW, PALMAR, L52/LT/TI	3
DORSAL, W32/RT/TI	2
DORSAL, W32/LT/TI	2
STRAIGHT, LATERAL, L52/TI	2
L-PLATE, DORSAL, L43/RT/TI	1
L-PLATE, DORSAL, L43/LT/TI	1
SCHMAL, PALMAR, L43/RE/TI	2
SCHMAL, PALMAR, L43/LI/TI	2
BREIT, PALMAR, L52/RE/TI	2
BREIT, PALMAR, L52/LI/TI	2
WAVE, SCHMAL, PALMAR, L43/RE/TI	5
WAVE, SCHMAL, PALMAR, L43/LI/TI	5
WAVE, SCHMAL, PALMAR, L52/RE/TI	5
WAVE, SCHMAL, PALMAR, L52/LI/TI	5
SCHMAL, DORSAL, L50/RE/TI	5
SCHMAL, DORSAL, L50/LI/TI	5
GERADE, LATERAL, L52/TI	5
L-PLATTE, DORSAL, L52/RE/TI	5
L-PLATTE, DORSAL, L52/LI/TI	5

MIDI 18MM KURZ, KAN/SB/TI	5
MIDI 19MM KURZ, KAN/SB/TI	5
MIDI 20MM KURZ, KAN/SB/TI	5
MIDI 21MM KURZ, KAN/SB/TI	5
MIDI 22MM KURZ, KAN/SB/TI	5
MIDI 23MM KURZ, KAN/SB/TI	5
MIDI 24MM KURZ, KAN/SB/TI	5
MIDI 25MM KURZ, KAN/SB/TI	5
MIDI 26MM KURZ, KAN/SB/TI	5
MIDI 27MM KURZ, KAN/SB/TI	5
MIDI 20MM LANG, KAN/SB/TI	5
MIDI 22MM LANG, KAN/SB/TI	5
MIDI 24MM LANG, KAN/SB/TI	5
MIDI 26MM LANG, KAN/SB/TI	5
MIDI 28MM LANG, KAN/SB/TI	5
MINI 16MM KURZ, KAN/SB/TI	5
MINI 17MM KURZ, KAN/SB/TI	5
MINI 18MM KURZ, KAN/SB/TI	5
MINI 19MM KURZ, KAN/SB/TI	5
MINI 20MM KURZ, KAN/SB/TI	5
MINI 21MM KURZ, KAN/SB/TI	5
MINI 22MM KURZ, KAN/SB/TI	5
MINI 23MM KURZ, KAN/SB/TI	5
MINI 24MM KURZ, KAN/SB/TI	5
MINI 25MM KURZ, KAN/SB/TI	5
MIDI K-DRAHTFUEHRUNG FUER \varnothing 1,1MM	5
MIDI MESSHÜLSE	5
MIDI SPIRALBOHRER \varnothing 2,3MM/KAN/AO	5
MIDI SCHRAUBENDREHER T8/KAN	5
MIDI SCHLIESSAUFSATZ	5
MIDI REINIGUNGSDRAHT \varnothing 1,1MM	5
MIDI BOHRDRAHTSPENDER \varnothing 1,1MM	5

HALLUX SET	1
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	4
SCALPEL HANDLE, NO. 4, 13.5 CM	2
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISS., TOENNIS, CVD., 17.5 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	4
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	4
FORCEPS, KOCHER, 1X2 T., STR., 16.5 CM	4
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, HEGAR, 20 CM	1
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, VOLKMANN, SH., 1-PR., 21.5 CM	1
RETRACTOR, KOCHER, SHARP, 1-PR., 22.5 CM	1
BONE LEVER, HOHMANN, 8 MM, 21.5 CM	2
BONE LEVER, HOHMANN, 18 MM, 23.5 CM	2
OSTEOTOME, LEXER, 20 MM, 22 CM	1
OSTEOTOME, LEXER, 25 MM, 22 CM	1
MALLET, PLASTIC INSERTS, 345 GR., 24 CM	1
BONE HOLDING FORCEPS, SLIM, 20 CM	1
BONE RONGEUR, BEYER, CVD., 18 CM	1
BONE CUT. FORCEPS, RUSKIN, CVD., 18.5 CM	1
BONE FILE, FLAT, 20 MM, 22 CM	1
RASPATORY, STR., ROUND, 14 MM, 20 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
KIDNEY DISH, 250X140X40 MM	1
GUIDE NEEDLE, ANG., TRIANGULAR, 8 CH	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

Q
19/8/14

SUPPL. FOR CEMENT REMOVAL	1
BOHRER Z. ZEMENTENTF. D 6MM	1
BOHRER Z. ZEMENTENTF. D 7MM	1
BOHRER Z. ZEMENTENTF. D 8MM	1
BOHRER Z. ZEMENTENTF. D 9MM	1
ZEMENTEXTRAKTOR MIT GEWINDE, D 8MM	1
ZEMENTEXTRAKTOR MIT GEWINDE, D 10 MM	1
ZEMENTEXTRAKTOR MIT GEWINDE, D 12 MM	1
ZEMENTEXTRAKTOR M. GEWINDE, D 14 MM	1
ZEMENTEXTRAKTIONSHAKEN, 6 MM	1
ZEMENTEXTRAKTIONSHAKEN, 8 MM	1
ZEMENTEXTRAKTIONSHAKEN, 10 MM	1
SLOTTED Mallet, UP TO 12MM	1
SUCTION TUBE, 8 MM, 280 MM, W. COLDLIGHT	1
FIBER OPTIC CABLE, 1.8 METER LONG	1
CANCELL.BONE & CEMENT REMOV.SPOON 6MM	1
CANCELL.BONE & CEMENT REMOV.SPOON 8MM	1
CANCELL.BONE & CEMENT REMOV.SPOON 10MM	1
ZEMENTENTFERNUNGSZANGE,5,5X20MM,GROB	1
ZEMENTENTFERNUNGSRONGEUR,5,3X20MM,260MM	1
ZEMENTENTFERNUNGS MEISSEL,VERRUNDET,12MM	1
ZEMENTENTFERNUNGSMEISEL,BAJON. 5,2 MM	1
ZEMENTENTFERNUNGSMEISEL,GEB. 8 MM	1
QUERKNEBEL, 8 MM, L 110 MM	1
WAGNER GOUGE 9 MM ANGULAR	1
WAGNER GOUGE, ANGLED BACK, 9MM, 34CM	1
WAGNER GOUGE 9 MM ANGULAR	1
WAGNER GOUGE, ANGLED BACK, 15MM, 34CM	1
WAGNER GOUGE, STRAIGHT, 9MM, 34CM	1
WAGNER GOUGE, STRAIGHT, 15MM, 34CM	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i>	
<i>The Instrument and Container should be of the same parent company.</i>	
<i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	

Handwritten signature and date:
 19.8.14

SUPL. SET FOR REMOVING BROKEN SCREWS ✓	1
GRASPING FORCEPS FOR BROKEN SCREWS	1
GOUGE FOR BROKEN SCREWS, 9MM, 22CM	1
COUNTERSINK, F. 3,5MM, TRIANGLE SHAFT	1
COUNTERSINK, F. 4,5MM, TRIANGLE SHAFT	1
COUNTERSINK, F. 6,5MM, TRIANGLE SHAFT	1
EXTRACT. BUTT F. BROKEN SREWS 3,5MM	1
EXTRACT. BUTT F. BROKEN SREWS 4,5MM	1
EXTRACT. BUTT F. BROKEN SREWS 6,5MM	1
EXTRACT. SLEEVE F. BROKEN SREWS 3,5MM	1
EXTRACT. SLEEVE F. BROKEN SREWS 4,5MM	1
EXTRACT. SLEEVE F. BROKEN SREWS 6,5MM	1
T-HANDLE, TRIANGLE CHUCK, FOR 6 MM	1
MALLET, PLASTIC INSERTS, 345 GR., 24 CM	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

QJW
 19.8.14

BASIC INSTR. SET, KNEE	1
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	4
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	4
SCALPEL HANDLE, NO. 4, 13.5 CM	2
SCALPEL HANDLE, NO. 3, 12 CM	2
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-DISS. SCISSORS, FINE, CVD., 20.5 CM	1
TC-DISS. SCISSORS, CVD., SERR., 18 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., 14.5 CM	2
TISSUE FORCEPS, 1X2 T., 20.5 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6
FORCEPS, KOCHER, 1X2 T., STR., 16.5 CM	6
DISS. FORCEPS, OVERHOLT, NO. 3, 21.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 18.5 CM	1
TC-NEEDLEHOLDER, HEGAR, 20 CM	1
RETRACTOR, DOUBLE, ROUX, NO. 1, 14.5 CM	2
RETRACTOR, LANGENBECK, 50X11 MM, 22 CM	2
RETRACTOR, KOCHER, 61X25 MM, 23 CM	2
RETRACTOR, VOLKMANN, SH., 1-PR., 21.5 CM	1
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
WOUNDSPREADER, SHARP, 3X4 T., 16 CM	1
ELEVATOR, LANGENBECK, 7 MM, 19.5 CM	1
WAGNER BONE ELEVATOR, BLUNT, 17CM	2
LANGE-HOHMANN LEVER MOD, 280MM	2
BONE CURETTE, VOLKM., OVAL, NO. 1, 17 CM	1
WELLER MENISCUS FORCEPS, CVD., 20CM	1
BONE HOLDING FORCEPS, LANGENBECK, 21 CM	1
BONE RONGEUR, RUSKIN, CVD., 19 CM	1
BONE RONGEUR, RUSKIN, CVD., 24 CM	1
BONE CUT. FORCEPS, RUSKIN, CVD., 18.5 CM	1
RASPATORY, LAMBOTTE, 15 MM, 21.5 CM	1
OSTEOTOME, LEXER, 10 MM, 22 CM	1
OSTEOTOME, LEXER, 15 MM, 22 CM	1
OSTEOTOME, LEXER, 25 MM, 22 CM	1
MALLET, RELPASE FREE, 620 GR., 26.5 CM	1
CASPAR TAMPERS 5 MM, 20 CM	1
CASPAR TAMPERS 7 MM 20 CM	1
FLAT NOSE PLIERS, TRANSM., WIDE, 18 CM	1
X-RAY RULER, PLASTIC, FLEXIBLE, 50 CM	1
PROBE, BUTTON END, Ø 2.0/2.0 MM, 18 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
KIDNEY DISH, 250X140X40 MM	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
GUIDE NEEDLE, CVD., KNIFE SHAPE, 14 CH	1
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

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[Handwritten Signature]
9.8.14

BASIC SCREW SET	1
CORTICALIS SCREW4,5/14MMLONG	1
CORTICALIS SCREW4,5/16MMLONG	1
CORTICALIS SCREW4,5/18MMLONG	1
CORTICALIS SCREW4,5/20MMLONG	1
CORTICALIS SCREW4,5/22MMLONG	1
CORTICALIS SCREW4,5/24MMLONG	1
CORTICALIS SCREW4,5/26MMLONG	1
CORTICALIS SCREW4,5/28MMLONG	1
CORTICALIS SCREW4,5/30MMLONG	3
CORTICALIS SCREW4,5/32MMLONG	2
CORTICALIS SCREW4,5/34MMLONG	2
CORTICALIS SCREW4,5/38MMLONG	2
CORTICALIS SCREW4,5/40MMLONG	2
CORTICALIS SCREW4,5/42MMLONG	1
CORTICALIS SCREW4,5/44MMLONG	2
CORTICALIS SCREW4,5/46MMLONG	1
CORTICALIS SCREW4,5/48MMLONG	1
CORTICALIS SCREW4,5/50MMLONG	1
CORTICALIS SCREW4,5/52MMLONG	1
CORTICALIS SCREW4,5/56MMLONG	1
CORTICALIS SCREW4,5/60MMLONG	1
CORTICALIS SCREW4,5/64MMLONG	1
CORTICALIS SCREW4,5/70MMLONG	1
MALLEOLAR SCREW 4,5/25MMLONG	1
MALLEOLAR SCREW 4,5/30MMLONG	1
MALLEOLAR SCREW 4,5/35MMLONG	1
MALLEOLAR SCREW 4,5/40MMLONG	1
MALLEOLAR SCREW 4,5/45MMLONG	1
MALLEOLAR SCREW 4,5/50MMLONG	1
MALLEOLAR SCREW 4,5/55MMLONG	1
MALLEOLAR SCREW 4,5/60MMLONG	1
MALLEOLAR SCREW 4,5/65MMLONG	1
MALLEOLAR SCREW 4,5/70MMLONG	1
SPONG.SCREW THR16MM100MMLONG	1
SPONG.SCREW THR16MM105MMLONG	1
SPONG.SCREW THR16MM/30MMLONG	1
SPONG.SCREW THR16MM/35MMLONG	1
SPONG.SCREW THR16MM/40MMLONG	1
SPONG.SCREW THR16MM/45MMLONG	1
SPONG.SCREW THR16MM/50MMLONG	1
SPONG.SCREW THR16MM/55MMLONG	1
SPONG.SCREW THR16MM/60MMLONG	1
SPONG.SCREW THR16MM/65MMLONG	1
SPONG.SCREW THR16MM/70MMLONG	1
SPONG.SCREW THR16MM/75MMLONG	1
SPONG.SCREW THR16MM/80MMLONG	1
SPONG.SCREW THR16MM/85MMLONG	1
SPONG.SCREW THR16MM/90MMLONG	1
SPONG.SCREW THR16MM/95MMLONG	1
SPONG.SCREW THR32MM/45MMLONG	1
SPONG.SCREW THR32MM/50MMLONG	1
SPONG.SCREW THR32MM/55MMLONG	1
SPONG.SCREW THR32MM/60MMLONG	1
SPONG.SCREW THR32MM/65MMLONG	1
SPONG.SCREW THR32MM/70MMLONG	1
SPONG.SCREW THR32MM/80MMLONG	1
SPONG.SCREW THR32MM/90MMLONG	1

QWY
19.9.14

SPONG.SCREW ALL THR.25MMLONG	1
SPONG.SCREW ALL THR.30MMLONG	1
SPONG.SCREW ALL THR.35MMLONG	1
SPONG.SCREW ALL THR.40MMLONG	1
NUT FOR 4,5 MM SCREWS	6
WASHER 13 MM	6
SCREW FORCEPS	1
WRAPPING DRAPE 100X100 CM	1
SCREW RACK	1
SPONG.SCREW THR16MM110MMLONG	1
COLOR-TAG, RED	2
CONTAINER MS, 30X30X16 CM, HANDLE GREY	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
CORTICALIS SCREW4,5/36MMLONG	2

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hdk
19-8-14

BASIC PLATE SET	1
PLATE HALF TUBE 4 HOLES 71MM	2
PLATE HALF TUBE 5 HOLES 87 MM	2
PLATE HALF TUBE 6 HOLES 103MM	2
PLATE HALF TUBE 7 HOLES 119MM	1
PLATE,COMPR.NARROW 4 HOLES 71MM	2
PLATE,COMPR.NARROW 5 HOLES 87MM	2
PLATE,COMPR.NARROW 6 HOLES 103MM	4
PLATE,COMPR.NARROW 7 HOLES 119MM	2
PLATE,COMPR.NARROW 8 HOLES 135MM	2
PLATE,COMPR.NARROW 9 HOLES 151MM	2
PLATE,COMPR.NARROW 10 HOLES 167MM	1
PLATE,COMPR.NARROW 12 HOLES 199MM	1
PLATE,COMPR.BROAD 6 HOLES 103 MM	2
PLATE,COMPR.BROAD 7 HOLES 119 MM	2
PLATE,COMPR.BROAD 8 HOLES 135 MM	2
PLATE,COMPR.BROAD 9 HOLES 151MM	1
PLATE,COMPR.BROAD 10 HOLES 167MM	1
PLATE,COMPR.BROAD 12 HOLES 199MM	1
PLATE,COMPR.BROAD 14 HOLES 231MM	1
SPOON PLATE, 5HOLES, 100 MM	1
SPOON PLATE, 6HOLES, 120 MM	1
T-PLATE, 4 HOLES, 84 MM	1
T-PLATE, 6 HOLES,116 MM	1
T-PLATE, 8 HOLES,148 MM	1
T-BUTTRESS PLATE, 4 HOLES	1
L-BUTTRESS PLATE,4HOLES,LEFT	1
L-BUTTRESS PLATE,4HOLES,RIGHT	1
TRAY, PERFORATED, 260X260X50 MM	2
SLOTTED HOLDING PIN 40MM	50
WRAPPING DRAPE 100X100 CM	2
COLOR-TAG, RED	2
CONTAINER MS, 30X30X16 CM, HANDLE GREY	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

BM
17-8-14

BASIC INSTRUMENT SET	1
SCREWDRIVER, 3.5 MM, INBUS, 25 CM	1
DRILL BIT 3.2MM X 145MM,	3
DRILL BIT 4.5MM X 120MM,	2
COUNTERSINK 3.2MM,	1
COUNTERSINK 4.5MM, T-HANDLE	1
TAP HANDLE WITH AO ATTACHMENT	1
TAP 4.5 MM SHORT	2
TAP 4.5 MM,	2
TAP 6.5MM,	1
TAP SLEEVE 3,5 MM	1
INSERT DRILL SLEEVE 4,5/3,2	1
TAP SLEEVE 4,5 MM	1
POINTED DRILL GUIDE FOR 25-212-45	1
SHAFT F.SCREWDRIVER HES.3.5MM,	1
NUTKEY SW 08	1
DEPTH GAUGE F.LARGE SCREWS	1
SHARP HOOK	1
DRILL SLEEVE F.TENSION DEV.	1
DRILL GUIDE F. PLATES 40 MM	1
TENSION DEVICE 8 MM SPAN	1
TENSION DEVICE, 20MM SPAN	1
SOCKET WRENCH 11 MM	1
WRENCH 11 MM	1
DRILL GUIDE 4,5 MM	1
BENDING IRON F.STAND.PLATES	2
BENDING PRESS	1
BENDING TEMPLATES, 5 HOLES	1
BENDING TEMPLATES, 7 HOLES	1
BENDING TEMPLATES, 9 HOLES	1
TRAY, PERFORATED, 480X260X50 MM	1
SLOTTED HOLDING PIN 50MM	8
SORTING DIVIDER 200MM	2
SORTING DIVIDER 230MM	1
SORTING DIVIDER 250MM	1
WRAPPING DRAPE 100X160 CM	1
COLOR-TAG, RED	2
CONTAINER MS, 60X30X11 CM, HANDLE GREY	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

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QPLW
19-8-14


SMALL FRAGMENT SET	1
K-WIRE, 1.2X160 MM, FLAT END	1
K-WIRE, 1.6X160 MM, FLAT END	1
K-WIRE, 2.0X160 MM, FLAT END	1
RASPATORY, CVD., STR., 6 MM, 18 CM	1
BONE LEVER, MINI-HOHMANN, 6 MM, 16 CM	1
BONE LEVER, MINI-HOHMANN, 8 MM, 16 CM	1
BONE LEVER, 15 MM, 16 CM	1
REPOSITION FORCEPS, LONG RATCHET, 15 CM	1
BONE HLD. FORCEPS, W. THREAD LOCK, 15 CM	1
CORTICALIS SCREW 3,5/10MMLONG	1
CORTICALIS SCREW 3,5/12MMLONG	1
CORTICALIS SCREW 3,5/14MMLONG	1
CORTICALIS SCREW 3,5/16MMLONG	1
CORTICALIS SCREW 3,5/18MMLONG	1
CORTICALIS SCREW 3,5/20MMLONG	1
CORTICALIS SCREW 3,5/22MMLONG	1
CORTICALIS SCREW 3,5/24MMLONG	1
CORTICALIS SCREW 3,5/26MMLONG	1
CORTICALIS SCREW 3,5/28MMLONG	1
CORTICALIS SCREW 3,5/32MMLONG	1
CORTICALIS SCREW 3,5/36MMLONG	1
CORTICALIS SCREW 3,5/40MMLONG	1
SPONG.SCREW SML.3,5/14MMLONG	1
SPONG.SCREW SML.3,5/16MMLONG	1
SPONG.SCREW SML.3,5/18MMLONG	1
SPONG.SCREW SML.3,5/20MMLONG	1
SPONG.SCREW SML.3,5/22MMLONG	1
SPONG.SCREW SML.3,5/24MMLONG	1
SPONG.SCREW SML.3,5/26MMLONG	1
SPONG.SCREW SML.3,5/28MMLONG	1
SPONG.SCREW SML.3,5/32MMLONG	1
SPONG.SCREW SML.3,5/36MMLONG	1
SPONG.SCREW SML.3,5/40MMLONG	1
SPONG.SCREW SML.3,5/45MMLONG	1
SPONG.SCREW SML.3,5/50MMLONG	1
SPONG.SCREW SML.3,5/55MMLONG	1
SPONG.SCREW SML.3,5/60MMLONG	1
SPONG.SCREW SML.4,0/12MMLONG	1
SPONG.SCREW SML.4,0/14MMLONG	1
SPONG.SCREW SML.4,0/16MMLONG	1
SPONG.SCREW SML.4,0/18MMLONG	1
SPONG.SCREW SML.4,0/20MMLONG	1
SPONG.SCREW SML.4,0/22MMLONG	1
SPONG.SCREW SML.4,0/24MMLONG	1
SPONG.SCREW SML.4,0/26MMLONG	1
SPONG.SCREW SML.4,0/28MMLONG	1
SPONG.SCREW SML.4,0/30MMLONG	1
SPONG.SCREW SML.4,0/35MMLONG	1
SPONG.SCREW SML.4,0/40MMLONG	1
SPONG.SCREW SML.4,0/45MMLONG	1
SPONG.SCREW SML.4,0/50MMLONG	1
WASHER 7 MM	6
CLOVERLEAF PLATE, 3-H., 88MM	1
CLOVERLEAF PLATE, 4-H., 105MM	1
PLATE 1/3 TUBE 25 MM	1
PLATE 1/3 TUBE 37 MM	2
PLATE 1/3 TUBE 49 MM	2
PLATE 1/3 TUBE 61 MM	2

Q. Kelly
7-19-8-14

PLATE 1/3 TUBE 73 MM	2
PLATE 1/3 TUBE 85 MM	1
PLATE 1/3 TUBE 97 MM	1
T-PLATE,SMALL,RIGHT ANG.45MM	1
T-PLATE,SMALL,RIGHT ANG.58MM	1
T-PLATE,SMALL,OBLIQU.ANG54MM	1
T-PLATE,SMALL,OBLIQU.ANG75MM	1
PLATE,SMALL FRAGMENT 73 MM	2
PLATE,SMALL FRAGMENT 97 MM	2
PLATE,SMALL FRAGMENT 121 MM	1
DRILL BIT 2.0MM X 100MM,	2
DRILL BIT 2.5MM X 110MM,	2
DRILL BIT 3,5MM X 110MM,	2
COUNTERSINK 2.0MM,	1
TAP 3.5 MM CORTICAL	2
TAP 3.5 MM CANCELLOUS	2
HANDLE FOR AO ATTACHMENT	1
DRILL GUIDE 2 MM	1
TAP/DRILL SLEEVE 3,5/2,5 MM	1
INSERT DRILL SLEEVE 3,5/2,7	1
SCREWDRIVER,HEXAGONAL 2,5 MM	1
SHAFT F.SCREWDRIVER HES.2.5MM,	1
DEPTH GAUGE F. SMALL SCREWS	1
SHARP HOOK	1
CLIP FOR PLATEHOLDING 3,5 MM	2
SCREW FORCEPS	1
DRILL GUIDE 3,5 MM	1
BENDING IRON F.SMALL PLATES	1
BENDING IRON F.SMALL PLATES	1
BENDING PLIERS	1
BENDING TEMPLATES, 5 HOLES	1
BENDING TEMPLATES, 7 HOLES	1
TRAY, PERFORATED, 260X260X50 MM	1
SLOTTED HOLDING PIN 50MM	6
SORTING DIVIDER 130MM	2
SORTING DIVIDER 230MM	1
WRAPPING DRAPE 100X100 CM	1
SMALL FRAGMENT RACK	1
COLOR-TAG, RED	2
CONTAINER MS, 30X30X16 CM, HANDLE GREY	1
BONE HOLDING FORCEPS, CVD., 14.5 CM	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i>	
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Boley
19-8-14

SMALL FRAGMENT INSTRUMENT SET	1
K-WIRE, 1.2X160 MM, FLAT END	1
K-WIRE, 1.6X160 MM, FLAT END	1
K-WIRE, 2.0X160 MM, FLAT END	1
RASPATORY, CVD., STR., 6 MM, 18 CM	1
BONE LEVER, MINI-HOHMANN, 6 MM, 16 CM	1
BONE LEVER, MINI-HOHMANN, 8 MM, 16 CM	1
BONE LEVER, 15 MM, 16 CM	1
REPOSITION FORCEPS, LONG RATCHET, 15 CM	1
BONE HLD. FORCEPS, W. THREAD LOCK, 15 CM	1
DRILL BIT 2.0MM X 100MM,	2
DRILL BIT 2.5MM X 110MM,	2
DRILL BIT 3,5MM X 110MM,	2
COUNTERSINK 2.0MM,	1
TAP 3.5 MM CORTICAL	2
TAP 3.5 MM CANCELLOUS	2
HANDLE FOR AO ATTACHMENT	1
DRILL GUIDE 2 MM	1
TAP/DRILL SLEEVE 3,5/2,5 MM	1
INSERT DRILL SLEEVE 3,5/2,7	1
SCREWDRIVER,HEXAGONAL 2,5 MM	1
SHAFT F.SCREWDRIVER HES.2.5MM,	1
DEPTH GAUGE F. SMALL SCREWS	1
SHARP HOOK	1
CLIP FOR PLATEHOLDING 3,5 MM	2
SCREW FORCEPS	1
DRILL GUIDE 3,5 MM	1
BENDING IRON F.SMALL PLATES	1
BENDING IRON F.SMALL PLATES	1
BENDING PLIERS	1
BENDING TEMPLATES, 5 HOLES	1
BENDING TEMPLATES, 7 HOLES	1
BONE HOLDING FORCEPS, CVD., 14.5 CM	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i> <i>The Instrument and Container should be of the same parent company.</i> <i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	


 19.8.14

WASHER F.HOLLOW SCREW 7 MM	6
WASHER F.HOLLOW SCREW 7 MM	6
WASHER F.HOLLOW SCREW 7 MM	6
GUIDE PIN 1,6/FOR 7MM SCREW	1
GUIDE PIN 1,6/FOR 7MM SCREW	1
GUIDE PIN 1,6/FOR 7MM SCREW	1
GUIDE PIN 1,0/MALL.+NAVICUL.	1
GUIDE PIN 1,0/MALL.+NAVICUL.	1
CORTEX-REAMER Ø 7MM	1
DRILL BIT Ø 5 MM	1
TAP Ø 7MM	1
T-HANDLE HEX.KEY FOR Ø 7,0MM	1
TISSURE PROTECTOR SLEEVE	1
CORTEX-REAMER 4,5MM	1
TAP 4,5 MM	1
T-HANDLE HEX.KEY FOR 4,5MM	1
T-HANDLE HEX.KEY FOR 4,0MM	1
RACK FOR HOLLOW SCREWS	1
COLOR-TAG, RED	2
CONTAINER MS, 30X30X21 CM, HANDLE GREY	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

(Signature) 19-8-14

CANNULATED SCREW INSTRUMENT SET	1
GUIDE PIN 1,6/FOR 7MM SCREW	1
GUIDE PIN 1,6/FOR 7MM SCREW	1
GUIDE PIN 1,6/FOR 7MM SCREW	1
GUIDE PIN 1,0/MALL.+NAVICUL.	1
GUIDE PIN 1,0/MALL.+NAVICUL.	1
CORTEX-REAMER Ø 7MM	1
DRILL BIT Ø 5 MM	1
TAP Ø 7MM	1
T-HANDLE HEX.KEY FOR Ø 7,0MM	1
TISSURE PROTECTOR SLEEVE	1
CORTEX-REAMER 4,5MM	1
TAP 4,5 MM	1
T-HANDLE HEX.KEY FOR 4,5MM	1
T-HANDLE HEX.KEY FOR 4,0MM	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

*Bill
19-8-14*

DYNAFIX SET 1	1
ASSAMBL JOINT F DYNA + MONOD	4
JOINT GOLD UPPER SECTION	12
JOINT GOLD LOWER SECTION	12
JOINT GOLD UP SECT W THREAD	6
JOINT BLUE UP SECT WO THREAD	6
JOINT BLUE UP SECT W THREAD	18
JOINT BLUE UP SEC THR+IDENTI	6
JOINT BLUE LOW SEC W TEETH	20
JOINT BLUE LOW SEC WO TEETH	8
HALFJOINT BLUE W TEETH 5MM	6
HALFJOINT BLUE W TEETH 20MM	2
WASHER RED 1,5 MM	3
WASHER RED 2,5 MM	3
WASHER RED 5,0 MM	3
CARBON-FIBRE ROD 100MM, 8MM	2
CARBON-FIBRE ROD 150MM, 8MM	2
CARBON-FIBRE ROD 200MM, 8MM	2
CARBON-FIBRE ROD 250MM, 8MM	2
CARBON-FIBRE ROD 300MM, 8MM	2
CARBON-FIBRE ROD 350MM, 8MM	4
CARBON-FIBRE ROD 400MM, 8MM	2
CARBON-FIBRE ROD 450MM, 8MM	2
HEX SCREW 10MM 5MM INNER HEX	10
HEX SCREW 20MM 5MM INNER HEX	15
HEX SCREW 25MM 5MM INNER HEX	10
HEX SCREW 30MM 5MM INNER HEX	6
HEX SCREW 50MM 5MM INNER HEX	6
SAFETY CAP	30
STEINMANN PIN WO THREAD200MM	4
STEINMANN PIN WO THREAD250MM	4
STEINMANN PIN WO THREAD300MM	4
STEINMANN PIN W THREAD 180MM	4
STEINMANN PIN W THREAD 200MM	4
HEX WRENCH 5MM F DYNA+MONODY	1
HANDLE F DRILL GUIDES	1
DRILL GIUDE 70MM	1
DRILL GUIDE 100MM	1
DRILL GUIDE USE JOINT 5/70MM	1
DRILL GUIDE USE JOINT 5/100	1
BASIC UNIT F COMPR-DISTR	2
UP SEC WO IDENT+MARK BASIC	2
UP SEC W IDENT+MARK BASIC UN	2
TWIST DRILL 3.5 X 145MM	1
TWIST DRILL 3,5X195MM	1
TWIST DRILL 4,5X145MM	1
TWIST DRILL 4,5X195MM	1
TAP HANDLE WITH AO ATTACHMENT	1
PERF TRAY DYNAF 520X260X48 MM	1
HALFJOINT GOLD W TEETH 5MM	6
WASHER RED 10 MM	3
SCHANZ-CAPRETTO SCREW 80 MM	2
SCHANZ-CAPRETTO SCREW 120 MM	2
SCHANZ-CAPRETTO SCREW 150 MM	6
SCHANZ-CAPRETTO SCREW 170 MM	6
SCHANZ-CAPRETTO SCREW 200 MM	4
CARDAN WRENCH 5 MM	1
COMBINED INSTRUMENT 5MM SCR.	1
COLOR-TAG, RED	2
HEX SCREW 60MM 5MM INNER HEX	6
CONTAINER MS, 60X30X11 CM, HANDLE GREY	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

*① Plus
15.8.14*

DHS SET	1
SCREWDRIVER, 3.5 MM, INBUS, 25 CM	1
D.M.S. LAG SCREW, 100MM	1
DMS-LAG SCREW, 110MM	1
DMS-LAG SCREW, 60MM	1
DMS-LAG SCREW, 70MM	1
DMS-LAG SCREW, 80MM	1
DMS-LAG SCREW, 90MM	1
DMS-COMPRESSION SCREW	3
DMS PLATE 4-HOLES	1
DMS PLATE 6-HOLES	1
DMS GUIDE WIRE	1
DMS MEASURING SLEEVE	1
DMS-SCREW DRIVER	1
D.M.S. T-HANDLE	1
DMS 3-STEP DRILL	1
DMS DRIVER	1
DMS TAP	1
DMS CENTRERING SLEEVE 11 MM	1
DMS CONNECTION PIECE	1
ADDITIONAL SLEEVE F. SCREW DRIVER D.M.S	1
TRAY FOR DMS IMPLANTS	1
DMS STERILISATION TRAY FOR INSTRUMENTS	1
COLOR-TAG, RED	2
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
DMS-LAG SCREW, 95 MM	1
DMS-LAG SCREW 85 MM	1
DMS PLATE 2-HOLES	1
DMS PLATE 5-HOLES	1

*The Instrument should be CE & FDA USA approved.
The Instrument and Container should be of the same parent company.
It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.*

B
19.8.14

DHS INTERMEDIATE SET	1
CORTICALIS SCREW3,5/16MM SELFCUT	1
CORTICALIS SCREW 3,5/18MM SELFCUT	1
CORTICALIS SCREW3,5/20MM SELFCUT	1
CORTICALIS SCREW3,5/22MM SELFCUT	1
CORTICALIS SCREW3,5/24MM SELFCUT	1
CORTICALIS SCREW3,5/26MM SELFCUT	1
CORTICALIS SCREW3,5/28MM SELFCUT	1
CORTICALIS SCREW3,5/30MM SELFCUT	1
CORTICALIS SCREW3,5/32MM SELFCUT	1
CORTICALIS SCREW3,5/34MM SELFCUT	1
CORTICALIS SCREW3,5/36MM SELFCUT	1
CORTICALIS SCREW3,5/38MM SELFCUT	1
CORTICALIS SCREW3,5/40MM SELFCUT	1
SCREWDRIVER, 2.5 MM, HEXAGON., 21 CM	1
DEPTH GAUGE F. SMALL SCREWS	1
DRILL BIT 2.5MM X 110MM,	1
DMS INTERM. GUIDE WIRE	1
DMS INTERM. MEASURING SLEEVE	1
DMS INTERM. LAG SCREW INSERTER	1
DMS INTERM. COMBO REAMER	1
DMS INTERM. PLATE IMPACTOR	1
DMS INTERM. TAP	1
DMS INTERM. LAG SCREW CONNECTOR	1
DMS INTERM. SAFETY INSERTER	1
DRILL GUIDE 3,5 MM	1
D.M.S. T-HANDLE	1
DMS INTERM. STORAGE F. INSTR. & IMPLANTS	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

BU
19-8-17

POWER DRILL MACHINE

Drill and Reamer Hand piece:

- Selection of Drilling and Reaming with the built in Switch option in same hand piece
- Selection of the drilling and reaming with the same attachment
- Should have dual trigger for forward/ reverse and oscillation mode
- Maximum speed of 1200 rpm in drilling, 270 RPM in reaming
- Should have variable speed control on the hand piece
- Should deliver maximum torque of 150 in/lbs
- Drill torque should be 35 in/lbs
- Should have DC brush less motor for low maintenance
- With appropriate adaptors for drilling, reaming and pin placement and wire placement
- Future up gradation option for Navigation interface for Joint replacement surgeries
- Weight of hand piece with battery should be not more then 3.5 lbs
- Fully Cannulated 4.0 mm hand piece
- Should have Pistol grip Hand piece
- Tool less 360 degree attachments insertion
- Should be autoclavable
- Dedicated Forward and Reverses switch with safe mode

Sagital Saw Hand piece:

- Should have two speed controls with standard and fast mode. Free speed of 10000 - 12000 cycles per minute.
- Saw Noise level should not more then 89db
- Weight of hand piece with battery should be not more then 3.5 lbs
- Blade mount should be adjustable to different angles with 360 degree rotation
- Should have tool less mounting of accessories
- Should have Dc brush less motor
- Should be autoclavable
- Should have safe mode

Reciprocating Saw Hand piece:

- Should have Safe Mode
- Should have minimum 13500 CPM
- Weight of hand piece with battery should be not more then 3.5 lbs
- Should have DC brush less motor for low maintenance.
- Should have Pistol grip Hand piece
- Should have tool less mounting of accessories for all blades or attachments. .
- Saw noise level should not more then 93db
- Should be autoclavable.
- With different blades it should have maximum speed of 13500CPM

Precision Saw Hand piece:

- Should have two speed controls with standard and fast mode. Free speed of 10000 - 12000 cycles per minute.
- Should move only blade tip for better precise cuts
- Should be able to hold the blade for more precise patella and precision cut
- Saw Noise level should not more then 89db
- Weight of hand piece with battery should be not more then 3.5 lbs
- Blade mount should be adjustable to different angles with 360 degree rotation
- Should have tool less mounting of accessories
- Should have Dc brush less motor
- Should be autoclavable
- Should have safe mode

A handwritten signature, possibly 'Bull', is written in black ink. Below the signature, the date '19-8-14' is written in a similar style.

POWER DRILL HANDSET EXTRA

Sternum Saw Hand piece:

- Should have Safe Mode
- Should have minimum 14000 CPM
- Weight of hand piece with battery should be not more then 3.5 lbs
- Should have DC brush less motor for low maintenance
- Should have Pistol grip Hand piece
- Should have tool less mounting of accessories for all blades or attachments
- Saw noise level should not more then 93db
- Should be autoclavable.
- With different blades it should have maximum speed of 14000CPM
- Should have option of Sternum Guard

Drill and reaming Attachments:

- 1/4 inch Jacobs Drill Attachment with key
- Keyless Chuck
- Hudson Modified Trinkle attachment
- Pin collet
- K Wire collet

Battery Charger:

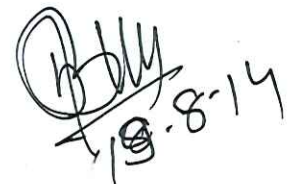
- 220-240 volts charger and should have the feature to count the charging cycle for a
- particular battery,
- Should have capability to identify the worn out battery
- Should have to charge four batteries at a time
- Should have an indicator to provide battery status for charging.
- Should be able to check over autoclaved battery cycles (Number of Time and Total time)
- Should have reconditioning futures for battery
- Should be able to charge different batteries with same charger

Battery Kit:

- Ni Mh batteries with low internal impedance to deliver higher current than other battery
- types,
- Ni Mh cells with capacity to produce more torque and non autoclavable with life of 300
- approximate charging cycles,
- Should have a run time of minimum 21 minutes
- Should include Autoclavable outer housing
- Shield to protect battery from the housing
- 180 degree opening of battery housing for easy insertion of battery
- Should have option for autoclavable batteries

Sterilization Case:

- Should be accommodate all hand piece, attachment and accessories for autoclave

A handwritten signature in a circle, followed by the date 1/8-8-14.

SPECIFICATION FOR ORTHO. OPERATING TABLE

1	The Electro-Hydraulic Operation table is for Multipurpose surgery and it must be C-Arm Compatible with Radiolucent Table Top.
2	Five section Table top with removable split leg section.
3	The table must be easy for setting up a patient positioning Sliding.
4	The table must be full body imaging is provided without having to move the patient or pre configure the table for transfer.
5	The Table must have Four point self compensating Brake System provides a sure footed stance for optimum stability.
6	The table must have 4 Swivel Casters and 4 electro hydraulic brake for ease of movement for cleaning between cases.
7	The table should have the facility of Fully mechanical emergency brake release.
8	There must be Full back up for Electrical System.
9	Require no patient reverse position.
10	The table must have Slim base and column design are ideal for C arm access.
11	It has Large perineal Cut for better access.
12	The table must have Secondary Switch Compartment on the base will ensure continuous operation if the remote control should fail.
13	The table pad alleviates shearing forces while substantially reducing pressures on the anesthetized patient.
14	Remote control must have with self diagnostic function, light weight ,waterproof, Low battery warning lamp, automatic brake locking feature ,One single energize button is pressed sequentially with the intended function button to eliminate the possibility of accidental patient movement.
15	The table must have Secondary control on base.
16	The table must have the facility of Over heating protection function for motors.
17	Preferred Country of Origin: Japan,Canada.

TABLE TECHNICAL DATA

ELEVATION RANGE:	100 CM-52 CM
TRENDELENGBURG :	Head Up/Down 25 °
LATERAL TILT :	20° Left/Right
BACK SECTION :	Up 90 °, Down 40°
TABLE TOP SLIDING RANGE :	53 cm (To head 22 cm, To Leg 31 cm)
FLEX/REFLEX :	40°/90°
HEAD SECTION(MANUAL) :	60° UP/90° DOWN
LEG SECTION :	90° DOWN/90° OPENING
RETURN TO LEVEL :	Trendelengburg,Lateral,Back section,Flex
<u>TABLE DIMENSION</u>	
TABLE TOP DIMENSION :	195cmX50cm
BASE DIMENSION :	97cmX 48cm
SIZE OF SIDE RAIL :	9mmX 32mm
<u>TABLE MATERIAL</u>	



 19.8.14

TABLE PLATE : Phenolic

SIDE RAIL : Stainless Bar

SIDE FRAME : Aluminium Alloy Casting

ELEVATION COLUMN(INSIDE) : Spheroidal Graphaite Iron Casting

ELEVATION COLUMN(COVER) : Stainless

BASE : Gray Iron Casting

TABLE ELECTRICAL

SUPPLY VOLTAGE : 100-240 V

BATTERY POWER : DC 24V

OPERATING VOLTAGE : DC 24

POWER INPUT : 400 VA

TABLE ACCESSORIES:

PLEASE NOTE THE COMPANY HAVING ALL THE BELOW ACCESSORIES AVAILABLE AT THEIR END CAN ONLY QUOTE.

COMMON ACCESSORIES ESSENTIAL TO BE QUOTED ALONG WITH THE TABLE

Standard Arm Board With 40 mm Pad(2 PCS)

Anesthesia Screen Frame with side rail clamp.

Leg Strap.

Body Strap.

X-Ray cassette tray with adjustable rod.

Side Rail Clamp for Round bar.(2 PCS)

Bar Clamp for Flat bar.(2 PCS)

Side rail clamp,Multi Type(2 PCS)

IV Pole with Clamp.(Four Hooks)

Mayo Instrument Tray with Stand

ACCESSORIES TO BE QUOTED

ORTHOPEDIC ATTACHMENT

Arm Rest with side rail clamp

Upper Arm Support With Side Rail Clamp

Leg Plate for Lateral Positioning

Pubis Support with Side Rail Clamp

Knee Crutches with Side rail Clamps(Pair)

July 19-8-14

C-Arm image intensifier

VISION C-ARM Image Intensifier

1. High Definition Image

The combination of CCD camera with a High definition image intensifier and newly developed digital image processor parents high definition image.

- Design provide ADC (Automatic Dosage Control) for hand free imaging.
- Choice of image processing, digital image rotation, contrast, stretching, averaging.
- Memory with 25 images has low noise level.
- Even a hair line crack can be clearly seen with magnification mode.
- Mechanical design to provide enhanced maneuverability with ease of C-ARM & other movements.
- Ergonomically designed handles and trolleys.
- The hard polymer casters can be steered instantly.
- Aluminum reverse 'C' provides complete balancing with sterilized draping during surgery.

2. Generator Rating high frequency

Frequency: 40 Khz

Power: 3.5 Kw

3. Radiography Mode

kVP output : 40 to 100 kVp.

mA output: upto 50 mA

mAs output: 0.5 to 250 mAs.

4. Fluoroscopy Mode

kVP output : 40 to 100 kVp.

mA output: 0.5 to 3 mA

Fluoro timer : 0 to 5 min cumulative timer with buzzer.

Safety Precaution: Temperature sensor to cut off exposure after overheating of X-Ray tube head.

5. X-RAY Tube


13.8.14

Focal Spot: 0.6/1.0mm Stationary anode.

6. Image Intensifier: 9" triple field, high gain, low dose image intensifier tube.

7. Camera: High Sensitivity , low noise CCD camera.

8. Monitor: Two 17" imported monochrome monitors with high density & low noise.

9. Memory : 25 frames image storage memory, with full function remote control, digital rotation throughout 360 degree.

10. Power Requirement:

Single phase: 220 VAC 10% 50 HZ

Standard 15 amp plug socket.

A handwritten signature, possibly 'Bill', is written in black ink. Below the signature, the date '19.8.14' is written in the same ink.

Navigation System

1) Instruments:

- System should have Active instrument technology.
- System should have Wireless Instrument technology, which does not infringe the field of work of the surgeon.
- System should have Bidirectional communication with instrument and camera system.
- The probe should be cordless with intelligent chip to support bidirectional communication with complete control of software work flow from within sterile field.
- Instruments should be sterilizable.
- System should have minimum consumables.
- Instruments should have built in Microchip Processor and **smart control buttons** to enable surgeon to **control and use the system in the sterile field** and avoid touch-screen and foot-paddle use.
- System should have calibration check with digitization instrument to avoid errors in digitization of anatomy intra operatively.
- Each navigated tracker should be equipped with memory chip which store the identity and geometric data inside so that navigation system can automatically recognize the identity of tracker without the chance of misinterpreting the identity of a particular tracker when several trackers are being used in tracking field.
- 3 camera system for better accuracy.
- In-house developed navigation camera for compatibility with future upgrades of machine/technology.
- No additional personnel required to run the system.
- The system must have dynamic referencing so that registration is not lost even if patient & camera moves.

2) Software: Express Knee

- Versatile and user friendly,
- Windows operating system,
- Easy to use, intuitive and user friendly interface,
- Modular system allowing for easy upgrades with same electronic hardware platform
- System should have pinless digitization for hip center
- System should have options to set user specific workflow and values.
- System should have measuring tool for anatomical measurements required intra operatively.
- It should be open navigated system that can be used with any implant.
- Should have point, axis and surface registration algorithm.
- System should have option to verify all the cuts taken with navigation system.

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- It should not leave any anchoring device holes on the bone surface post surgically which may lead to post-op pain, though system may have anchoring devices mounted on articulating surfaces but not on non-articulating surfaces.
- It should be fast and support primarily for mechanical axis alignment through distal femoral and proximal tibial cuts.
- System may only suggest femoral rotational value with or without navigating for the cut.

2)Software: Precision

- Versatile and user friendly,
- Based on Windows operating system,
- Easy to use, intuitive and user friendly interface,
- Modular system allowing for easy upgrades with same electronic hardware platform
- System should have pinless digitization for hip center.
- System should have options to set user specific workflow and values.
- System should have option to verify all the cuts taken with navigation system.
- System should have an option of being used as open or closed system, allowing user to use specific set of implant or any other implant family.
- System should have implant sizing feature which may work only for recommended implant family and may not work for all the implant families depending upon system compatibility.
- System should have point, axis and surface registration algorithm.
- System should do implant positioning and should have features to suggest medio-lateral overhang and AP distance.
- System should guide in Gap monitoring and soft tissue balancing.
- System should have bone mapping as well as bone morphing technology.
- System should indicate possible error of Notching for femoral component placement.
- System should indicate exposed anterior cortex after positioning implant.
- System should have capability to check initial and final limb alignment by giving varus valgus values throughout the range of motion as a comparative study.
- System should have applicability to be used for deformity correction / HTO procedures.
- System should help in femoral rotation, flexion extension values.
- System should help in tibial rotational values.
- System should have feature to estimate medial condyle in cases of varus knees clinically appearing at very late stage where condyle has worn out significantly.
- System should have measuring tool for anatomical measurements required intra operatively.
- System should have adaptability for anterior as well as posterior referencing surgical approach.

✓
 Gill
 19/3/14

3) Platform: NAV3

- System should have a 3 camera system with digital localizer inbuilt in the camera itself.
- System should have Dual Monitor, Windows Operating System inbuilt in navigation system so as no separate planning space or workstation required
- The system should have facility that navigation software can be operated by the surgeon himself from within the sterile field without keyboard or mouse.
- The system should have appropriate disk drives or networking facilities in order to transfer image media.
- System should be able to restore registration if system shut down abruptly even without UPS.
- Available with laptop navigation system
- Easy to maintain, support, portable and easy to handle.

1
GMM
19.8.14