

**Office of the Central Purchase unit
National Institute of Technology Srinagar.**

No.NIT/CPU/18/3702-05

Dated:- 13.02.20188

**Modification Notice to Tender No. NIT/CPU/17/3538-45 dated
29.11.2017 for Physiotherapy Equipments.**

The modifications in specifications of the Physiotherapy equipments are given on our website www.nitsri.ac.in. The eligible bidders can now submit their bid up-to 28th February-2018 (4.00 P.M.). Other terms & conditions remain same as give in the original bid document.

Sd/
Officer In-charge
Central Purchase Unit

REVISED SPECIFICATIONS OF PHYSIOTHERAPY EQUIPMENT FOR MEDICAL UNIT OF THE INSTITUTE ADVERTISED VIDE NO. NIT/CPU/17/3538-45 DATED 29.11.2017

S.NO	NAME OF EQUIPMENT	TECHNICAL SPECIFICATIONS	QUANTITY
1.	EMG BIOFEED BACK UNIT	<ul style="list-style-type: none"> • 2-Channel EMG feedback to evaluate and function of muscles. • 2-Independent isolated current channel for stimulations. • 1-Channel pressure feedback. • 3-Different feedback modes-Continuously work/rest and template. • Current required minimum 30 to 35 types. • Programmable position at least 500 • Pre-programmed programs at least 100. • EMG and Stimulation signal graphically reproduced with adjustable sensibility. • Combined application of EMG-feedback with electrotherapy. • Combined application of EMG with pressure measurement. • Data can be stored and recall for analysis. • Connections for various surface and cavity electrodes. • Can be upgraded with a Vacuum unit, Ultrasound module. • Measurement range EMG-4-10000 μv and logarithmically. 	01

		<ul style="list-style-type: none"> • Measurement range pressure 0-more than 350 hpa. • System should be upgradable through memory card • Adjustable, scratch resistant TFT display with 5 deg to 175 deg • International safety standards CE/TUV certified. • Works on 220V/50Hz. • Should be supplied with CVT of required rating. 	
2.	SHORTWAVE DIATHERMY UNIT	<ol style="list-style-type: none"> 1. Microprocessor based Continuous and Pulsed Shortwave Diathermy Unit for Superficial and deep tissue treatment. 2. Operating Frequency :27.12 MHz 3. Operations modes: Capacitive, Resistive and Inductive 4. Emission modes : Continuous and Pulsed 5. Continuous Output : 450 W to 470 W 6. Pulsed Output : 1050 W to 1100 W 7. Tuning : Automatic 8. Frequency : 20 – 200 Hz 9. Impulse length : 400 to 450 micro seconds 10. Display : LCD 11. The unit should offer minimum 20 pre-set therapeutically protocols for common conditions. 12. The unit should be supplied complete with disc electrodes(2 Nos),rubber electrodes(2 Nos), felt spacers(2 Nos), high frequency cables(2Nos), electrode arms(2 Nos), Inductive electrode and flexiplode (One each). 13. Should be USFDA/CE Certified Product 14. System should work on 220V-230V/50Hz. 15. Should be supplied with Servo Voltage Stabilizer of required rating. 	02

3.	CPM FOR UPPER LIMB	<p>Single Stationed Electronic Continuous Passive Motion unit for passive exercises of the shoulder, elbow and wrist joint for ensuring rapid post operative recovery.</p> <p>Shoulder Joint:</p> <ul style="list-style-type: none"> - Elevation range: 5°-175° - Adduction/abduction range: 40°-130° - Intra extra-rotation range: 90°-0°-90° <p>Elbow Joint:</p> <ul style="list-style-type: none"> - Extension flexion: 0°-140° - Prono-Supination: 90°-0°-90° <p>Wrist Joint:</p> <ul style="list-style-type: none"> - Flexion extension: 80°-0°-80° - Ulnar radial deviation: 25°-0°-30° - The unit should have max. speed of 3°-3.5°/sec., - The unit should have laser pointer to ensure the correct positioning of the joint - The unit should have patient stop switch for patient safety. - The unit should have control panel on the machine itself and not on the remote control for safety reasons. - The single unit should be able to rehabilitate shoulder, elbow and wrist joints. - The unit should be movable on castor wheels. - The unit should be supplied with a memory card for running the program - The unit should be capable of exercising spinal cord injury patients in supine position - Automatic increase of breadth of movements on both limits - Pause in both limits - Warm-up cycles - Unit height should be adjustable as per patient's requirement. - Unit should be supplied with accessory trolley. 	02
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		<ul style="list-style-type: none"> - Should be supplied with complete set of accessories required for passive movements of shoulders, elbow and wrist. - Should meet the international safety standards. - The unit should have international quality standard like US FDA/ European CE Certification. - Should be supplied with voltage stabilizer of required rating. 	
4.	CROSSTRAINER	<p>The unit should have the following technical specification: Smart-card technology</p> <p>Mains voltage : 230 V/50 Hz</p> <p>Braking principle Load : Process-controlled eddy-current brake 0-400 W</p> <p>(resolution: 5 W increments)</p> <p>rpm-independent</p> <p>From 35-110 RPM 6-60 Nm</p> <p>(re-solution: 0.5Nm)</p> <p>rpm-independent from 35-110 RPM</p> <p>Min. adjustable power : 20 W</p> <p>Heart rate monitoring : Pulse monitoring, standard with earclip and receiver.</p> <p>Exercise modes : Constant torque, constant power, and constant heart rate</p> <p>Parameter displayed : Time, heart rate, speed, distance, work, power, resistance and RPM.</p> <p>International safety standards CE/TUV certified.</p> <p>Should be supplied with CVT of required rating, if required.</p>	02

5.	MICROWAVE DIATHERMY	<p><u>MICROWAVE DIATHERMY</u> Microwave Diathermy should be of the latest modern technology.</p> <ol style="list-style-type: none"> 1. Microwave Diathermy for physical therapy should have various intensity levels for treatment of various indications of physiotherapy. 2. The unit should have the following features. <ol style="list-style-type: none"> i. It should have at 10 levels of microwave output. ii. It should be with or without separate radiators/emitters. iii. Microwave radiated through a wave guide with 3 slits. iv. Operating frequency: 2,450 MHz v. Mains Voltage 230 V +/- 10 %, 50 Hz vi. Maximum Average Output 250 watts vii. Pulse Output for deep penetration for 1500 w peak or more. <p>Optional static or mobile movement range setting for microwave diathermy.</p>	02
6.	TRACTION WITH COUCH	<p><u>COMPUTERIZED TRACTION UNIT:</u></p> <ol style="list-style-type: none"> 1. Traction unit should be computerized. 2. The unit should perform static force, Intermittent Force, Pulsation force and Combination of static, Intermittent, pulsation forces. 3. Traction unit should perform Lumber Traction and Cervical Traction 4. Unit should provide with Belts, Straps and Flexion Stool for Lumber and Cervical Traction. 5. With more than Max. 50 programmable for Extension Stool for Lumber and Cervical Traction. 6. Provision of Safety Switch controllable by patient 7. Max. Lumber Force – 60 Kg. 8. Max. Cervical Force – 12 Kg. <p><u>COUCH</u></p>	02

		<ol style="list-style-type: none"> 1. Couch frame should be metal frame with padding material. 2. The Couch upholstery should be made of 3 sections as or more to avoid any frictional errors. 	
7.	REHABILITATION TREADMILL WITH TESTING AND TRAINING FACILITY	<ol style="list-style-type: none"> 1. Should be used for the application like Amputees, Orthopaedic, Neurologic, Spinal Cord, Stroke, Vestibular and older adult patients, joint replacement patients etc. 2. Should have Instrumented Walking Surface to provide the biofeedback to display comparison of actual footfall to target gait parameter. 3. Should have windows CE operating system for enhanced software, graphics, audio and connectivity capabilities. 4. Treadmill should always start at 0 mph with 0.1 mph speed increments. 5. Should have speed range of : Forward: 0-16km/h Reverse: 0-4.5km/h in 0.1 mph increments. 6. Should have elevation range of : 0-15% grade or -3 to 12% grade 7. Should have exact-Track Belt to eliminate belt shift and tracking problems. 8. Should be of Low Profile with 6 inch-step up height. 9. Should have Motor 2 HP with 4Q- Pulse Width Modulation Control. 10. Walking Area should be approximately 20 inch x 64 inch (51 x 160cm) 11. Should have visual prompts to provide corrective action and positive reinforcement. 12. Footfall Targets should be normalized to limb length for accurate step cycle sequencing 13. Should have Equate Belt Speed to match a patient's individual step cycle. 14. Should display Total Time, Average Walking Speed, Total Distance and Steps, Average Step Length, Step Length variability, Time of each foot. 15. Should be supplied with voltage stabilizer of required rating. 16. Should be supplied with Partial Weight Bearing Suspension frame 17. Dynamic suspension system should maintain consistent unweighing during walking or running. 	02

		<p>18. The system should accommodate children to adults.</p> <p>19. The system should have patient unloading weight capacity of 60-70kg.</p> <p>20. The system should have patient weight capacity of 130-140 kg.</p> <p>21. The system should have unique integral lift mechanism to assist patients from seated position.</p> <p>22. The system should be provided with universal support vest which accommodates chest sizes of 24" to 56" (61 to 140 cm).</p> <p>23. The system should have got digital readout to quantify unloaded weight with battery backup</p> <p>24. The display should be supported by battery power.</p> <p>25. The system should have adjustable height to fit 8 feet ceilings.</p> <p>26. The system should have large, easy roll locking casters.</p> <p>27. The system should be provided with adjustable arm support and therapist seat.</p> <p>28. Both Treadmill and Partial Weight Bearing System should have CE/FDA/MDD/EEC conformity.</p>	
8.	VIBRATION AND MASSAGE UNIT	<p>The unit should have the following features; -</p> <ul style="list-style-type: none"> • Useful for Physiotherapy, Sports Therapy, Chiropractic, Osteopathy. Variable frequency controls 0-60 Cycle Per Second. • Rolling caster stand & accessory tray. • Must have Physio kit of 4 different applicators for Soft Massage, Deep Massage, Trigger Point, and Relaxation Drainage. • Directional - stroking combines both Horizontal and Vertical Forces • 20 Volt Brushless motor With internal 24 Volt!! 50 W Transformer. • Operable on 230 Volt/50 Hz. • The system should also have a robust independent hand held unit for mobilization of secretions in chest. • The hand held unit should be capable of providing 1400 / 2800 strokes /min. 	01

		<ul style="list-style-type: none"> • The weight of the handheld independent unit should not be more than 1.7Kg • The housing and base plate of the hand held unit should be made of tough, impact resistant plastic and should be capable of withstanding long and heavy usage. • Hand out should be supplied with rubber applicator and plastic hyperaemia brush, packed in handy case for easy transportation to wards. • Should have the international safety standard like CE/TUV. • Should be supplied with CVT of required rating. 	
9.	<p><u>COMBINATION THERAPY Unit (Electrotherapy and Ultrasound Therapy)</u></p>	<p>The unit should have the following features: Combined Therapy System for Ultrasound and Electrotherapy none unit. Colour graphic screen with touch panel User-friendly operation by touch screen and buttons. Ultrasound therapy features Continuous and pulsed work mode Double-frequency probes: 1MHz and 3 MHz Ergonomic treatment heads Modulation from 1 to 200 Hz Head Size: 5cm sq. and 1cm sq. Ultrasound Probes should be water-resistant, Sound and visual Signal of contact of the probe with patient Automatic calculation of depth and energy density Automatic power switch off Timer up to 30 mm. Real-time device with indication of correct contact between coupling of head and patient's skin Unlimited Memories to store the patient data file Pre-set protocols with images for placements of Electrodes Intensity: 3W cm² in both continuous and pulsed modes European CE/FDA certified products.</p>	02

		<p>Power supply: 220V/50Hz</p> <p>Electrotherapy features</p> <p>Setting of different wave modulations.</p> <p>Outputs: 2 independent output channels</p> <p>Low frequency</p> <p>currents: Galvanic, galvanic-interrupted, diadynamics (CP, LP,interrupted and interrupted), rectangular, triangular, exponential, Biphasic, Trabert, faradics (triangular, rectangular)</p> <p>Medium Frequency Currents: IFT bipolar, IFT quadripolar, IFT isoplanar, IFT vectorial, MF of stimulation, Kotz Current</p> <p>Should have minimum 50 Pre-set protocols with anatomical images.</p> <p>Should have 700 to 1000 slots for storing the customized protocols.</p> <p>Should be European CE/US FDA certified product.</p> <p>Should work on Power supply of 220V/50Hz.</p> <p>Should be supplied with the voltage stabiliser of required rating. --</p>	
10.	<u>CPM FOR LOWER LIMBS</u>	<p>The unit should have the following features:</p> <ol style="list-style-type: none"> 1. Knee and Hip mobilization 2. Ankle Mobilisation is must in the same unit 3. Digital operating pannel with LCD display. 4. Should have .Memory Card for storing the personalised patient programs for repeated use. 5. Should have speed control during Flexion /Extension. 6. Should have Force control 7. Should have Work time control 8. Facility to adjust automatic increase in Extension range 9. Facility to adjust automatic increase in Flexion range 10. Pause during flexion/ Extension 11. Warm up Cycles. 12. The unit should have got functional panel on the unit only and not on the patient stop switch or remote Control for patient safety. 	02

		<p>13. Knee range of movement: 0° - 110°</p> <p>14. Ankle range of movement in passive : 20° - 0° - 40°</p> <p>15. Hip range of movement (mid limb): -7° - 115°</p> <p>16. The unit should have international quality standard like US FDA/ European CE Certification.</p> <p>17. Should be supplied with voltage stabiliser of required rating.</p>	
11	TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION UNIT (Table-top)	<p>i. A micro controller based multi programmable transcutaneous electric nerve stimulator with self-explanatory operating instructions LCD display two channel output.</p> <p>ii. Frequency: 2 Hz to 250 Hz.</p> <p>iii. Input voltage 220v AC / 50Hz</p> <p>iv. Intensity 99 mA</p> <p>v. Pulse width 100 msec – 400 msec, variable</p> <p>vi. Therapy mode: Continuous, burst, linear, trapezoidal and no- linear</p> <p>vii. Output: Two channel</p> <p>viii. Auto mode: Linear, Trapezoidal, non-linear (all frequencies change one by one within 3 sec.</p> <p>ix. Parameter selection: Manual and programmed.</p> <p>x. Intensity: 0 -160 V linear adjustment.</p> <p>xi. Patient safety: Safety Isolated power output.</p> <p>xii. Treatment timer: Digital timer</p> <p>xiii. Output display: LCD Display for CH1 & CH2.</p>	02
12.	INFRA-RED LAMP	<p>i. Power: 150 W</p> <p>ii. Voltage: 220 / 230 or 240/250 V</p> <p>iii. Frequency: 50 Hz.</p> <p>iv. Cord length: 180cm.</p> <p>v. Insulation: Class II (double isolation)</p> <p>vi. Type of lamps: PAR 38 E, 150 W + prismatic rings for more focus.</p>	01

		vii. Lifetime of lamp: 750 sessions of 10 minutes	
13.	QUADRICEPS EXERCISE TABLE WITH BACK REST	<ul style="list-style-type: none"> i. Total metal tubular construction with powder coated finish ii. The table top should have foam (2") high quality rexine iii. Angled (0-99 deg) alignment of back rest iv. Adjustable height of arm rest v. Adjustable lever (0 to 360 deg) vi. Should be adjustable both by increasing the weight as well as variability of the swinging arm. vii. Exercises offered: Knee stretching, knee flexion , press up exercises and resistance exercises 	01
14.	AXIAL SHOULDER WHEEL	<ul style="list-style-type: none"> i. For Shoulder and Supination-Pronation exercises ii. Wall mounting unit with adjustable height and radius iii. Fitted with resistance mechanism adjustable from zero to maximum by tightening the strap iv. 360 degree scale to measure the degree of revolution from either side v. Chrome plated adjustment bars 	01
15.	PARALELL BAR WITH MIRROR	<ul style="list-style-type: none"> i. Length of the Parallel walking bar should be 3.75 metres, ii. Hand-rail made of chrome plated steel tubing 1.5" outer dia. iii. Outer uprights made of thick steel tubing (2" dia.) iv. Mounted on a wooden platform with rubber inclination settings. v. Height adjustable with rubber from 30" to 44" vi. Width adjustable from 15" and 25" vii. Adjustment should be easily done by means of setting pins at the required holes and can further be stabilizing by tightening the screws. viii. Should come with detachable polished teak wood abduction board covered with non-slip matting, which fits on the holes in the middle of the platform steel 	01

		<p>uprights and hand rails are painted.</p> <p>ix. Postural Mirror (With Stand)</p> <p>a. Protected by 5cms wide hardwood frame with back covered by Ply board</p> <p>b. Fitted with Angular and tubular stand</p> <p>c. Frame mounted on 4 ball bearing castors.</p>	
16.	Thermotherapy/cryocum contrast Therapy Unit	<ol style="list-style-type: none"> 1. The combined and sequential use of heat therapy and cold therapy even immediately after a trauma, or acute trauma, without the risk of too much pain. 2. Thermo shock for reduction in the recovery time and to improve the range of motion. 3. Adjustable thermotherapy up to +40⁰ C or higher. 4. Adjustable Cryotherapy up to -15⁰ C or lower. 5. Should be able to provide the contrast therapy in between the lower and higher temperatures. 6. Graphic feedback of temperature in real-time 7. Automatic feedback of patient's temperature 8. Should have the hand held applicator for direct contact for more effective and deeper vasoconstriction 9. Large coloured touch screen display. 10. Pre-set therapeutic protocols 11. Memories for customized protocols 12. International safety standard European CE/US FDA. 13. Power supply: 230V- 50 Hz 14. Should be supplied with the stabiliser of required rating. 	01
17.	LASER THERAPY UNIT	<ol style="list-style-type: none"> 1. The unit should deliver the high energy density to the deepest tissues 2. The unit should have wave length of 600 to 950 nm 3. The unit should have the continuous and pulsed mode. 4. Should have power output power of 7000mW. 	01

	<ol style="list-style-type: none">5. The unit should have the modulation frequency adjustable between 10-2000 Hz6. The unit should have duty cycle: 10%-100%7. Should have Laser Energy Setting 0 to 100 Joules.8. The unit should have the facility of automatic calculation of Energy density and application time.9. The unit should have library with large range of pre-set therapeutic protocols with images.10. The unit should have minimum 75 free memories for storing customized protocols.11. The unit should be supplied with 2 nos. of protective goggles.12. Also present protocols should be adjustable during treatment.13. Should have free memory space for storing individualized treatment protocols.14. Treatment time adjustable between 1 to 99 minutes15. Should have the feature of automatic rotation of scanning plane between -45 degree to +90 degree for easy reach of laser beam during laser application in different postures.16. Unit should have adjustable Laser Arm which gives flexibility to reach to the patient when in use and can be stored safely when the unit is not in use.17. Unit should have independent control for the scanning section and probe section.18. Hand Probe should be of minimum power of 12W Peak.19. Unit should have emergency key and security lock.20. Should be supplied with two pair of protective goggles.21. Should be USFDA/European CE certified.22. Should be supplied with CVT of suitable rating.	
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		23. The System should work on 220-230V/50 Hz power supply.	
18.	Sauna Room	<ul style="list-style-type: none"> - Sauna Room Area: Room Size- 5 x 4 x 7 Feet Include: - All Four side wall, Roof, Floor, Front & side door + wall with double panel, single sitting bench, Head rest, towel holder, news paper holder & all side back support Total Area of Sauna Room:- 244 Sq Feet - Sauna Heater Features: - <ol style="list-style-type: none"> 1. Digital Control Panel Operated. 2. Auto Timer Cut-off System. 3. Auto Temperature Cut-off System. 4. Stainless Steel makes Heating Element. 5. Soft touch switches. 6. LCD display : Finland Lava Stone : <p>Sauna Room Light Sauna Room Accessories • Sauna light. • Thermometer. • Hygrometer.</p>	
19.	Finger ladder	Polished hard wood, 30 numbered steps, 80cm, 6cm deep, 100 cm height	02
20.	Ankle exerciser	Aluminum boot , with straps, dorsi planter flexion exercises, resistance varying nut, tom recorded	01
21.	Dumbbells	With cart, steel dumbbells, 1 kg, 1.5 kg, 2 kg, 2.5 kg, 3 kg, 3.5 kg, 4kg, 4.5, kg, 5 kg	01 SET
22.	Medicine balls	Wooden cabinet, five balls, fine leather, stitched with lead cords, 1kg, 2kg, 3kg, 4kg, 5kg	
23.	Gymnastic ball with cabinet	Firm inflated with mechanical pumps, different sizes pressures, 65 cm diam or more, 55 cm diam or less	01

24.	Weight cuffs	Lead shots/sand, straps to hold cuffs, ½ kg, 1 kg, 1.5 kg, 2 kg, 2.5 kg, 3 kg, 3.5 kg, 4kg, 4.5, kg, 5 kg	01 set
25.	Supinator/ pronator unit	Wall mounting, single grip unit, resistance controlled mechanism	01
26.	Treatment couch	Wooden, 72 inches x 24 inches x 31, adjustable back rest, with writing board, drawer, n cupboard	06
27.	Screens	Standard size, foldable, mounted on wheels	06
28.	Mattress for activities	Foam stuffed, rexine covering, washable, 160cm x 190cm x 10 cm	06
29.	Overhead pulley	T bracket, wall mounting, two pulleys, cord and two handles, shoulder elbow exercises, assistive, resistive	01
30.	Rowing machine	60 inch long, 12 inch wide, foam padded seat, nylon wheels, five springs of different tensions, two handles varying resistances	01
31.	Steppers (foldable)	Plastic/ double step wooden	01
32.	Hand exercise gym	Wooden table, laminated top, six pulleys in steel frame, leather loops, pulleys with hanging weights, wheel for wrist exercises, 5 weights, 100, 200, 300, 400, 500, gms	01

Note:

- All the equipments should be certified by either FDA or CE
- Installation list from the reputed govt/semi govt hospitals with name of hospital/institution, equipment details, model, year of supply
- Services after installation
- Consumable items use should not be encouraged (e.g. gas, . Liquid etc)
- In case of change of model, there should be scope of up gradation
- Training to the concerned doctors, assistants regarding the operation of equipments.