



## **ANNEX 1**

### **TECHNICAL SPECIFICATIONS: DIODE LASER FOR VARICOSE VEINS SURGERY**

#### **1. MAIN UNIT**

- a. Diode laser, configurable with one or more wavelengths,
- b. Up to 50 W of output power (810 nm, 980 nm, 1064 nm, 1470 nm)
- c. Beam delivery by flexible fibers and handpieces
- d. Pilot beam red or green, < 5 mW, adjustable
- e. Should have a built-in cooling mechanism
- f. Should work with electrical input of 230 – 240 V.
- g. The laser unit should be CE or US FDA certified.

#### **2. SHOULD HAVE THE FOLLOWING OPERATING MODES**

- a. Continuous Wave (CW)
- b. Pulsed Mode
- c. LFD Mode (optional, for enhanced coagulation control)

#### **3. SHOULD HAVE THE FOLLOWING ACTIVATION PROFILES**

- a. Continuous
- b. Single pulse (1ms - 5 s)
- c. Pulse repetition (1ms - 5 s)

#### **4. USER INTERFACE OF THE UNIT SHOULD MEET THE FOLLOWING REQUIREMENTS**

- a. Colour Touch Panel: 8 inch or larger
- b. Storage for user profiles and individual treatment parameters
- c. Interactive treatment assistant for guided choice of operating parameters
- d. Audio output per energy pulse or continuous
- e. USB port for export of treatment protocols



## 5. INTEGRATED PORTS

- a. USB
- b. Warning lamp system
- c. Scanner

## 6. OTHER REQUIREMENTS

- a. Should provide Protective Goggles
  - i. Protective Goggles (980 - 1500 nm) - CE or US FDA certified x 2 sets
  - ii. Protective Goggles for Spectacle Wearers (980 - 1500 nm) CE or US FDA certified x 2 sets
  - iii. Protective Goggles for Patients. CE or US FDA certified x 2 sets
- b. Should Provide:
  - i. Endo-Radial Fiber 400 $\mu$ m in diameter x 1pack (10 pcs); single use
  - ii. Endo-Radial Fiber 600 $\mu$ m in diameter x 1pack (10 pcs); single use
  - iii. Focussing hand pieces x 2
- c. Should provide:
  - i. Should provide training for two Surgeons of AEH on laser varicose vein surgery in a suitable location abroad.
  - ii. Should conduct in-house demonstrations / trainings (at AEH) for the two surgeons who were trained abroad.
  - iii. Should provide operator manual (English)
  - iv. Service manual including circuit diagrams and spare parts list (English)
  - v. Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.

## 7. OPTIONAL ITEMS (TO BE QUOTED SEPERATELY)

- i. Should quote optional items like trolley and any other items that may be required to effectively use the laser unit in clinical setting.

