**Date: 03/09/2014**

**Amendment No: 1**

**Ref: Tender Enquiry No: HLL/BME/Calibration-03/14-15 Dated 22.08.2014**

Pre-Bid meeting against the referred tender was held on 01/09/2014 at HLL Lifecare Ltd., Thycaud, Trivandrum- 695 014

The following amendments are issued with respect to the above Tender Enquiry Document.

**Technical Specification**

**Item No. 09**

**NIBP SIMULATOR**

***Existing Specification:***

|  |  |
| --- | --- |
| **S.N** | **NIBP SIMULATOR** |
|  | **Specification** |
| 1 | Should be a easy to carry portable system. |
| 2 | **Static Pressure range:** 50 mmHg to 400 mmHg in selectable increments of 1 mmHg |
| 3 | **Digital Manometer pressure range:** 0 to 400mmhg |
| 4 | **Maximum pressure**: 400mmhg |
| 5 | **Accuracy:** ± 1 % |
| 6 | **Measurement Time:** 0 s to 1000 s max |
| 7 | **Maximum Inflation Pressure:** 0.1 mmHg/s to 1000 mmHg/s |
| 8 | **Inflation Time:** 0.1 s to 1000 s |
| 9 | **Heart Rate** |
| 9.1 | Adult: 120/80 (100) mmHg 69 BPM |
| 9.2 | Neonatal: 70/40 (55) mmHg 80 BPM |
| 9.3 | Hypertensive: 190/120 (150) mmHg 69 BPM |
| 10 | **Perform leak test** |
| 10.1 | Start pressure :500 mmHg max |
| 10.2 | Elapsed time: 60 s |
| 10.3 | Leak-rate range: 0.25 mmHg/min to 500 mmHg/min |
| 10.4 | Pump :2 liters/minute minimum |
| 11 | **Power Supply:** 120 Vto 240 V |
| 12 | **Digital interfaces:** RS 232 serial port for printer |
| 13 | Should be operated both on electric power and battery. |
| 14 | Should support USB |
| **15** | **Acessories,Spares and Consumables** |
| 15.1 | NBP simulator as per specs - 01 |
| 15.2 | User manual - 01 |
| 15.3 | All accessories and consumables required for standardization of simulator |
| **16** | **Standards, safety and Calibration** |
| 16.1 | Comprehensive warranty for 2 years |
| 16.2 | During the warranty period, the equipment should be calibrated free of cost |
| 16.3 | Equipment should be European CE/FDA approved. |
| 16.4 | Comprehensive training for HLL staff till familiar with the system. |

***Amended as:***

|  |  |
| --- | --- |
| **S.N** | **NIBP SIMULATOR** |
| **1** | **Technical Specification** |
| 1.1 | Should be able to use for dynamic blood-pressure simulations for testing adult and neonatal noninvasive BP monitors, including both arm- and wrist-cuff types. |
| 1.2 | Should be a easy to carry portable system. |
| 1.3 | Should have large LCD display |
| 1.4 | **Static Pressure range:** 50 mmHg to 400 mmHg in selectable increments of 1 mmHg |
| 1.5 | **Digital Manometer pressure range:** 0 to 400mmhg |
| 1.6 | **Maximum pressure**: 400mmhg |
| 1.7 | **Accuracy:** +/-1% |
| 1.8 | **Hear Rate Range:** Adult: 120/80 (100) mmHg, 70bpm Neonatal: 70/40 (55) mmHg, 80bpm Hypertensive: 190/120 (150) mmHg, 70bpm |
| 1.9 | Should be able to simulate different normal sinus rhythm and arrhythmias, irregular pulse. Also have options for user definable simulations |
| 1.10 | Should be able to perform pressure leake test. The pressure port is pressurised from 0 to 400mmHg and keeps track of the pressure loss over time and should have a display of leak rate |
| 1.11 | Should have different pressure measurement units like kpa, mmHg, cmH2O, psi |
| 1.12 | Should have laptop interface facility. Should supply required interface cables for connecting to laptop |
| 1.13 | Should be supplied with automation software for testing & report generation |
| **2** | **Accessories** |
| 2.1 | AC power cord with Indian plug |
| 2.2 | Carrying Case |
| 2.3 | All necessary cables/probes/accessories for the complete functioning of the system |
| **3** | **Standards , Safety & Documentation** |
| 3.1 | Manufacturer should have valid ISO 13485 certification (copy should be attached with the quote) |
| 3.2 | Shoiuld have CE/FDA certification (copy should be attached with the quote) |
| 3.3 | Should be supplied with valid calibration certificate |
| 3.4 | Should be supplied with user Manual (English), Service manual/calibration manual (English) one each |
| 3.5 | During the warranty period, the equipment should be calibrated free of cost |
| 3.6 | Comprehensive training for HLL staff till familiar with the system. |

**All other contents, terms & conditions of the tender enquiry remain unchanged.**