

APPENDIX 3k

LOT 11 SPECIFICATION

ULTRASOUND SCANNERS AND ASSOCIATED OPTIONS AND RELATED SERVICES

1. Introduction

- 1.1. This Lot is for the supply of Ultrasound Scanners for a range of clinical applications, utilising high frequency sound waves to provide an ultrasound-based diagnostic imaging technique used for visualising internal body structures and organs. The Ultrasound images (sonograms) are to be created by sending a pulse of ultrasound into the tissue of the patient using an ultrasound transducer (probe) with the reflected sound recorded and displayed as an image to the operator.
- 1.2. The core product lines within this Lot are as follows:
 - 1.2.1 Fixed cart based Ultrasound scanner.
 - 1.2.2 Trolley based Ultrasound scanner.
 - 1.2.3 Handheld Ultrasound scanner.
- 1.3. Product line(s) must be supplied with a minimum 7 year expected lifecycle under proper use and maintenance.

2. Criteria applicable across product Lines 1 and 2

- 2.1. All product lines must be delivered free of charge to a location as directed by either NHS Supply Chain or the customer and must include a free of charge warranty for a minimum of 12 months (including repair, parts, labour and servicing) from the date of acceptance by the customer.
- 2.2. Scanners must support the relevant DICOM service classes as either a service class user (SCU) or service class provider (SCP), or both (SCU/SCP).
- 2.3. Scanners must display 2-D images in real-time.
- 2.4. Scanners must provide on-screen display of mechanical index and/or thermal index values conforming to IEC 60601-2-37 Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment.
- 2.5. Scanners must have an alphanumeric keyboard for data entry and annotation, this can be either a physical or virtual keyboard.
- 2.6. As a minimum the visual display must show;
 - 2.6.1 Patient name;
 - 2.6.2 Hospital/centre;

Document #: LEGAL TEMP 810-06		
Revision: 4		Page 1 of 4

- 2.6.3 Date; and
 - 2.6.4 Text and anatomical site markings.
- 2.7. Scanners must have the provision of scanning pre-sets.
 - 2.8. Scanners must provide on-screen display of scanning parameters.
 - 2.9. Scanners must provide selectable pre- and/or post- grey-scale image processing.
 - 2.10. Scanners must have an image freeze function.
 - 2.11. Scanners must have 2-D digital measurement callipers with on-screen display of distance.
 - 2.12. Scanners must provide internal image storage and retrieval including;
 - 2.12.1 One touch digital image storage; and
 - 2.12.2 Cine loop for B-mode and/or colour flow.
 - 2.13. Switching of transducers must be possible in 20 seconds or less.
 - 2.14. As a minimum, the following major controls must be alterable with one direct control;
 - 2.14.1 B-mode;
 - 2.14.2 Depth;
 - 2.14.3 Frequency;
 - 2.14.4 Patient type;
 - 2.14.5 Colour flow scale; and
 - 2.14.6 Gain.
 - 2.15. Guidance on the correct cleaning and disinfection of transducers must be available and provided on request.

3. Line 1 - Fixed Cart Based Ultrasound Scanner

- 3.1. A cart based ultrasound scanner must be undetachable from its base. As a minimum, scanners must be able to perform for the required care area.
- 3.2. The cart must have easily moveable, full swivel wheels. As a minimum, foot pedal controlled brakes must be available on at least two wheels.
- 3.3. Scanners must have the ability to vary the magnification of a selected region of a real-time image.
- 3.4. Scanners must have harmonic imaging.
- 3.5. Scanners must provide a composite TV (PAL/ HDMI) video output or equivalent.

Document #: LEGAL TEMP 810-06		
Revision: 4		Page 2 of 4

- 3.6. Minor controls (e.g. persistence, Doppler filter) must be alterable in a maximum of two steps.
- 3.7. Scanners must boot up from fully off to ready for use in less than 200 seconds.
- 3.8. Scanners must have a multiple transducer options available to cover specialist exams.
- 3.9. Scanners must be able to switch between a minimum of two connected transducers.
- 3.10. Scanners must have an image display monitor with a minimum 8" screen (measured diagonally corner to corner).
- 3.11. The scanner console must have a physical or virtual control panel.
- 3.12. The scanner must offer ergonomic adjustments for the keyboard/control and screen position to ensure operator may adjust working and viewing position.
- 3.13. Scanners must incorporate a cable management system for connected transducers.

4. Line 2 - Trolley Based Ultrasound Scanner

- 4.1. An ultrasound scanner with features that allow it to be portable (i.e. compact, carry handle/hand-carried) with the ability to attach and detach from a trolley. As a minimum Scanners must be able to perform scans for the required care area.
- 4.2. Trolleys must be easily moveable, full swivel wheels. As a minimum brakes must be available on at least two wheels.
- 4.3. Scanners must have harmonic imaging.
- 4.4. Scanners must not exceed 10 kg in weight excluding trolley.
- 4.5. Scanners must boot up from fully off to ready for use in less than 140 seconds.
- 4.6. Scanner must operate from integral mains rechargeable batteries and last at least 30 minutes.
- 4.7. Scanners must have multiple transducer options available to perform scans for the required care area.

Document #: LEGAL TEMP 810-06		
Revision: 4		Page 3 of 4

- 4.8. Minor controls (e.g. persistence, Doppler filter) must be alterable in a maximum of two steps.
- 4.9. Scanners must be able to switch between a minimum of two connected transducers.
- 4.10. Scanners must have an image display monitor with a minimum 8" screen (measured diagonally corner to corner).
- 4.11. Scanners must incorporate a cable management system for connected transducers, when connected to a trolley.

5. Line 3 – Handheld Ultrasound Scanner

- 5.1. An ultrasound scanner that cannot be mounted onto a cart or trolley. As a minimum scanners must be able to perform scans for the required care area.
- 5.2. Scanners must be delivered free of charge to a location as directed by either NHS Supply Chain or the customer and must include a free of charge warranty for a minimum of 12 months (including repair, parts, labour and servicing) from the date of acceptance by the customer.
- 5.3. Scanners must be able to send imaging in a format that is compliant with data security requirements.
- 5.4. Scanners must not exceed 1 kg in weight.
- 5.5. Scanners can be application based.
- 5.6. Scanners must display 2-D images in real-time.
- 5.7. Scanners must have an image freeze function.
- 5.8. Guidance on the correct cleaning and disinfection of devices and/or transducers must be available and provided on request.
- 5.9. Scanner must operate from integral mains rechargeable batteries and last at least 60 minutes.

Document #: LEGAL TEMP 810-06		
Revision: 4		Page 4 of 4