



**REPUBLIC OF SERBIA - AP VOJVODINA**  
**GENERAL HOSPITAL "Đorđe Joanović"**  
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 03 FEB 2025  
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### CLARIFICATIONS 1

### RELATED TO TENDER PROCEDURE (QUESTIONS AND ANSWERS)

<b>Programme</b>	<b>Interreg IPA CBC Romania – Serbia Programme</b>
<b>Project title</b>	<b>Harmonization of Cardiovascular Diseases Management from Prevention to Heart Transplantation in the Cross Border Area - SIPHEALTH</b>
<b>Name of the Contracting Authority</b>	<b>General Hospital "Đorđe Joanović" Zrenjanin, Dr Vase Savića 5, 23000 Zrenjanin Serbia</b>
<b>Tender procedure</b>	<b>Medical equipment</b>
<b>Reference No</b>	<b>RORS00008/GHZr/TD6</b>
<b>Datum, Mesto / Date, Place</b>	<b>03.02.2025, Zrenjanin</b>

No	Question	Answer
1	Required: Min. 4 "pinless" equal active connectors for transducers, not counting "pencil" connectors Is it acceptable for the customer to minimally change this point so that it reads: Min. 4 active connectors for transducers, not counting "pencil" connectors	Yes, it is acceptable. Appropriate changes to tender dossier will be incorporated by corrigendum
2	Required: Monitor with panel size min. 21" on a movable artificial arm, with the resolution min. 1920x1080 pixels. Display of the ultrasound image allowed over the entire ultrasound screen in 16:9 format in high resolution. Is it acceptable for the customer to minimally change this point so that it reads: Monitor with panel size min. 21" on a movable artificial arm?	Yes, it is acceptable. Appropriate changes to tender dossier will be incorporated by corrigendum
3	Required: Simultaneous real-time image display of the ultrasound image from the ultrasound monitor on the "Touch-screen" panel Is it acceptable for the customer to minimally change this point so that it reads: Simultaneous real-time image display of the ultrasound image from the ultrasound monitor on the	Yes, it is acceptable. Appropriate changes to tender dossier will be incorporated by corrigendum



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	"Touch-screen" panel or dual mod on US monitor?!	
4	<p>Required: Control panel with keyboard (on the touch screen or on the control panel) and interactive background lighting, heigh-adjustable (up and down min. 20 cm), with a rotating control panel (min. 170° from the center)</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Control panel with keyboard (on the touch screen or on the control panel) and interactive background lighting, heigh-adjustable, with a rotating control panel?</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>
5	<p>Required: Frequency range of the device from 1 to 22 MHz or wider</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Frequency range of the device from 1 to 15 MHz or wider</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>
6	<p>Required: The system has the ability to detect speed in CW Doppler min. 25 m/s</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: The system has the ability to detect speed in CW Doppler min. 15 m/s</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>
7	<p>Required: Quick waking-up of the device for operation (max. 120 seconds) - from completely switched off. Integrated battery for transport mode; in transport mode, it provides a source of energy for min. 40 minutes</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Quick waking-up of the device for operation. Integrated battery for transport mode.</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>
8	<p>Required: Linear transducers (supports high-frequency linear transducers &gt;20 MHz)</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Linear transducers (supports high-frequency linear transducers &gt;15 MHz)</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>
9	<p>Required: Fully automatic cardiac software, AI-based, for automatic measurement in 2D and Doppler exams. Supports min. following 2D automatic measurements: IVSD, LVIDD, LVPWD, LVIDS, Aortic diameter, Asc AO Diam, Ao Sinus Diam, Ao STJ Diam, LVOT diameter, RV base, RV mid, RV length, RV annulus. Supports min. following Doppler measurements: MV Peak E Vel, MV Peak A Vel, LVOT VTI, LVOT Vmax, AV VTI, AV Vmax, PV VTI, TR Vmax</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>



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	Is it acceptable for the customer to minimally change this point so that it reads: Fully automatic cardiac software, AI-based, for automatic measurement in 2D and Doppler exams.	
10	<p>Required: Fully automatic AI-based software performing the following functions:</p> <p>1.22.15 - Calculation of the GLS ("Global Longitudinal Strain") value of the left ventricle, by pressing a button without any manual definition of cardiac structures required. Automatic recognition of common sections (AP4, AP3 and AP2) with the manual correction allowed. Automatic detection of left ventricular contour. The analysis of sections allowed with and without ECG recording. Display of the 18th seg. "peak-systolic" and "end-systolic" strain in the form of a "bull's-eye" diagram. Ability Display of "endo" and "mid" strain values allowed</p> <p>1.22.16 - Fully automatic calculation of EF, using the same images/sections already processed for LV strain analysis.</p> <p>1.22.17 Complete automatic assessment of the segmental wall motion of the LV ("segmental wall motion"). Display of values of each segment in apical sections. Display of the 17th "Bull's-eye", manual change allowed of the values in the apical views and to "Bull's-eye". "Wall motion score index", export of data to a report allowed</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Automatic AI-based software performing LV Strain</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>
11	<p>Required: 1.22.20 Fully automatic advanced software, AI-based, which automatically detects the segments and quantifies the left ventricle and left atrium of the heart during a full cycle, based on the 3D acquisition of the heart. The analysis allowed of multiple heart cycles as well as display of mean values in one analysis. The aim is to speed up the exam of patients with chronic diseases and as a result automatically yields the following measurements:</p> <p>1.22.21 - Measurements and volumes of the left ventricle at the end of systole and at the end of diastole,</p> <p>1.22.22 - The volume of the left atrium at the end of systole</p> <p>1.22.23 - Ejection fraction of the left ventricle</p>	<p>Yes, it is acceptable.</p> <p>Appropriate changes to tender dossier will be incorporated by corrigendum</p>



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	<p>1.22.24 - Heart rate</p> <p>1.22.25 - Cardiac output</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Fully automatic advanced software, which automatically detects the segments and quantifies the left ventricle and left atrium of the heart during a full cycle, based on the 3D TTE acquisition of the heart</p>	
12	<p>Required: Matrix transthoracic cardiac transducer 1 - 5MHz or wider, which enables 2D and 4D display of the heart on the device, with min. 3,000 crystal elements; supporting technology that enables rotation of the ultrasound beam, without moving the transducer (from 0 to 360°) in real time on the device.</p> <p>Is it acceptable for the customer to minimally change this point so that it reads: Matrix transthoracic cardiac transducer 1 - 5MHz or wider, which enables 2D and 4D display of the heart on the device,</p>	<p>Yes, it is acceptable. Appropriate changes to tender dossier will be incorporated by corrigendum</p>
13	<p>Required: 1.27 The device is upgradeable with the following hardware and software options:</p> <p>1.27.1 Program for estimating the left atrium (LAA) from three-dimensional TEE volume data. Automatic measurements after confirming the projection are min. following: min. and max. axis, range and area. Global or local measurement correction allowed.</p> <p>1.27.2 3D quantification Live 3D, 3D Zoom; offers viewing, cropping, cutting and quantification, including distance measurements and calculation of area, left ventricular volume in min. two planes, ejection fraction (EF) and LV left ventricular mass,</p> <p>1.27.3 Software for mitral valve analysis from real-time volume data. Recognition and labeling of the topology of the mitral valve without any manual labeling of the annulus, leaflets and coaptation required. Visualization of mitral valve anatomy in the form of a static and dynamic model.</p> <p>1.27.4 Doppler view/mode with the features of a 3D view for better visualization of vascular structures while reducing artifacts, which uses and combines information from color and power doppler views/mode. Available in min. 5 display levels</p>	<p>Yes, it is acceptable. Appropriate changes to tender dossier will be incorporated by corrigendum</p>



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1.27.5 Also available in combination with high-sensitivity Doppler display/mode for the visualization of microvascular structures

1.27.6 TEE transducer from 2 to 8 MHz or wider, intended for 2D and live 3D (4D) TEE exams, in single crystal technology and matrix technology, with min. 2,500 crystal elements,

1.27.7 Linear transducer with a frequency range of 2 – 22 MHz or wider, in single crystal and matrix technology, transducer width FOV min. 50mm, with the number of crystals min. 1,900

Is it acceptable for the customer to minimally change this point so that it reads: The device is upgradeable with the following hardware and software options:

- 3D Quantification Live 3D, 3D Zoom; offers viewing, cropping, cutting and quantification,
- 4D TEE transducer,
- Software for mitral valve analysis

  
Vanja Kunjin, Director

