물 품 규 격 서

☐ 입찰공고번호 : (학)일송학원 관리국 제2025-123-1호

☐ 입찰건명 : 로봇수술센터 Robot Surgical System 구매(재공고)

☐ 수요기관 : 한림대학교 강남성심병원

☐ 납품장소 : 수요기관 희망장소 입고도

☐ 물품내역 등

연번	품명(영문, 국문)	규격 및 사양	총 구매예정수량 (Q'TY)	1회 최대 발주수량	WARRANTY 기간	단위 (UNIT)
1	Robot Surgical System (자동화시스템 로봇수술기)	하단 참조	1	1	검수(합격) 완료 후 인수일로부터 1년	SET

☐ 공통사항

1. 장비의 설치와 작동 및 교육은 무상으로 제공한다.
2. 수요기관 담당자 입회 하에 계약상대자는 제품의 설치 테스트 및 시험작동을 실시하여야 한다.
3. **무상 하자담보 책임기간은 *물품 검수(합격)완료 후 인수일로부터 1년*을 기본 원칙으로 하며 계약상대자의 추가 제안에 따라 검수(합격)완료 후 인수일로부터 1년 기간을 초과하여 설정할 수 있다.**
4. 무상 하자담보 책임기간 중 수요기관의 사정으로 인하여 부서 및 장비의 위치가 불가피하게 이동을 필요로 할 경우 설치 시 상호 간의 협의에 따라 무상 또는 부득이 한 경우 실비 기준으로 이루어진다.
5. 무상 하자담보 책임기간 중 중 있거나 고장 난 장비 부품(다빈치 카탈로그 소모품류는 제외)은 전문서비스 인력을 제공하여 무상 수리 또는 교체하며, 공급된 장비의 부속품이 단종된 경우, 정상적인 장비 사용이 가능하도록 수리 또는 동등한 부품으로 교체해야 한다.
6. 계약상대자는 장비 납품 시 납품일을 기준하여 제품 제조년월이 12개월 이내인 장비를 납품하고 납품장비에 해당 제조년월이 명시되어야 한다.
7. 기존 사용 중인 의료장비 보상판매 조건으로 제안할 수 있다.

<규격·사양>

A. Features

The System is designed to enable complex surgery using a minimally invasive approach. The System consists of a Surgeon Console, a Patient Cart, and aVision Cart and is used with a camera, instruments, and accessories.

1. SurgeonConsole

The surgeon seated at the Surgeon Console, controls all movement of the instruments and camera byusing two hand controls (masters) and a set of foot pedals. The surgeon views the camera image on a three-dimensional (3D) viewer, which provides a view of patient anatomy and instrumentation, along with icons and other user interfacefeatures.

- 3D Viewer: The high-resolution stereo viewer consists of two independent LCD displays.
- Hand controls (masters): The two hand controls are positioned below the magnified, three-dimensional image of the surgical site. The surgeon grasps the hand controls while viewingthe surgical site. The instrument tips, as seen in the 3D Viewer, appearal igned with the surgeon's hands at the hand controls.
- Armrest: Contains a touch pad user interface, ergonomic controls for adjusting the ergonomics of the Surgeon Console, and power button and an emergency stop button.
- Foots witch Panel: Houses foot pedals used to activate various system modes, such as camera control, as well as activate various instrument functions, such as monopolar and bipolar cautery.
- Brakes: There are two brakes located on the Surgeon Console base.

2. Patient Cart

The Patient Cart is the operative component of the System. Its primary function is to support the positioning of the surgical port and to mani pulate the surgical instruments and camera. The Patient Cart is positioned at the operating room table and contains an instrument arm that is positioned with respect to the target patient anatomy. The instrument arm contains four instrument drives that hold up to three surgical instruments and the camera.The patient-side assistant installs and removes the camera and instrumentsintra-operatively.

- Boom: The boom is an adjustable support structure for the instrument arm.
- Column: The column moves the boom upor down.
- Base: The base includes amotorized cart drive for positioning and transportation, the Patient Cartelectronics, and a connector panel.
- Helm: The Helm includes the handlebars with cart drive enable switches, a touch pad, two joysticks, a Power button, an Emergency Stop button, a cable holder, and a battery indicator. The handlebars and cart drive enable switches are used to maneuver the Patient Cart around the OR. The Helm includes a touch pad for system messages and guided menu options, while the joysticks include boom position control and boom height

control to manually position the boom and column.
- Instrument Arm: The instrument arm contains four instrument drives (three for surgical instruments and one for the camera) that hold the surgical instruments and camera and a cannula arm that holds the cannula.
- Port clutch buttons: Allow horizontal and vertical movement of the boom and column to reposition the instrument arm.
- Arm clutch buttons: Allow rotation of the instrument arm around the remote center and rotation of the instrument drives
- Cannula arm: Contains a cannula mount, cannula mount button, cannula arm stow button, and a port clutch button. The cannula mount provides a connection point for the cannula and the cannula mount button enables attachment and removal of the cannula. The cannula arm stow button retracts the cannula arm for draping, stowing or patient clearance.
- Instrument drives: The instrument drives (one for the camera and three for instruments) contain a drive clutch button, an instrument drive display, and an instrument disengage button. The surgical instruments and camera are each installed on an individual drive.
- Drive clutch button: Allows the user to manually insert and retract the instruments and camera through the Entry Guide and cannula.
- Instrument disengage button: Disengages the motor drives from the instrument. This button is used during emergency instrument removal.
- Instrument drive display: Communicates the instrument drive identity (camera, 1, 2 and 3) and status.

3. Vision Cart

The Vision Cart includes the supporting electronic equipment such as the light source and video/image processing equipment for the camera and the main electronic/software processing units. The Vision Cart also has a touchscreen to view the endoscopic image and adjustsystem settings.
- Touch screen: The touchscreen monitor provides a view of the surgical site from patient-side and a set of controls for endoscope and video configurations.
- Accessory Shelves: Shelving units for accessory equipment, such as insufflators.
- Energy Shield Monitor: Provides monitoring of electro surgical energy during use of Endo Wrist SP monopolar instruments, which are shielded to prevent capacitive coupling.
- ERBEVIO dV: Integrated electro surgical unit (ESU) for instrument activation thatcan be used with robotic and manual instruments.
- Endoscope Controller: Contains a high-intensity light source to illuminate the surgical siteand the electronics for processing the video images from the camera.
- Video Processor: Receives and processes video input from the camera and sends it through the system electronics to the touchscreen and 3D viewer.
- System electronics (Core): Contains the electronics for advanced processing of video image, system control algorithms, and control of ESUs when the surgeon usesinstrument function foot pedals.
- Drawer: Contains the monopolar and bipolar auxiliary foot pedals connected to the VIOdV.

- Tank holders: Two tank holders support use of an insufflator. To accommodate varioussize tanks, the tank holders have adjustable straps. The tank holders supporttwo tanks, each weighing up to 50 lbs. (22.32 kg).

B. Specifications

1. Power Specifications

-	Surgeon Console	Patient Cart	Vision Cart (Excludes VIO dv)
Voltage	100-230 VAC 50/60 Hz Auto Sense	100-230 VAC 50/60 Hz Auto Sense	100-230 VAC 50/60 Hz Auto Sense
Rating and Typical Current	1000VA Continuous 8.4 A at 115 V~ 4.2 A at 230 V~	1200VA Continuous 7.5 A at 115 V~ 3.8 A at 230 V~	1500VA Continuous 12 A at 115 V~ 6 A at 230 V~
Typical Current in Sleep Mode	0.7 A at 115 V~ 0.35 A at 230 V~	1.0 A at 115 V~ 1.0 A at 230 V~	2.0 A at 115 V~ 1.2 A at 230 V~
Typical Current in Sleep Mode (Battery Charging)	N/A	8.5 A at 115 V~ 4.6 A at 230 V~	N/A
Max Inrush Current at 230 VAC	24.1 A	56.0 A	63.6 A
Backup Power	N/A	5 min	N/A
Surge Protected	Yes	Yes	No

2. Physical Dimensions

	Surgeon Console	Patient Cart	Vision Cart
Height (min)	57 in. (145 cm)	80.5 in. (204 cm)	76 in. (193 cm) with touch screen stowed
Height (max)	71 in. (180 cm)	98.5 in. (250 cm)	88 in. (223.5 cm) with touch screen extended
Width	38 in. (96.5 cm)	41 in. (104 cm)	30 in. (76.2 cm)
Depth	34.3 in. (87.1 cm)	70 in. (177.8 cm)	36.5 in. (92.7 cm)
Weight	620 lbs. (281 kg)	2000 lbs. (907 kg)	818 lbs. (380 kg)
Ground Clearance	1.9 in. (48 mm)	1.8 in. (47 mm)	4 in. (10.2 cm)

3. Environmental Specification

- EnvironmentalConditions: Operating
- Temperature:10° to 30°C / 50° to 86°F,
- Humidity:10% to 85% non-condensing
- Atmospheric Pressure: 523 mm Hg(10,000ft) to 774 mm Hg(-500ft)

C. Consist of(per 1Set)

1. Single Console System	1Set
- System Surgeon Console	1ea
- System Patient Cart	1ea
- System Vision Cart	1ea
Warranty period: One (1) year from the Acceptance.	
2. System Documentation including:	1Set
- User's Manual For System	
- User's Manual for Instruments and Accessories	
3. System Software	1Set
Warranty period: One (1) year from the Acceptance.	
3. Training Instrument	1Set
- Needle Driver	2ea
- monopolar curved scissors	1ea
- Cadiere forceps	1ea
- Maryland bipolar forceps	1ea
- ENDOSCOPE,FIREFLY,CE	1ea
Warranty period: 90 days from Acceptance	
4. Accessory Starter Kit	1Set
- 25mmx100mm Blunt Obturator	1ea
- Entry Guide Kit (Disposable)	1Box(6ea)
- 25mm x 100mm Cannula	1ea
- Shielded Monopolar Energy Cord (13 ft / 4 m)	2ea
- Bipolar Energy Instrument Cord (16 ft / 5 m)	3ea
- Instrument Arm Drape (disposable)	8ea
- Instrument Sheath (disposable)	1Box(30ea)
- Camera Sheath (disposable)	1Box(10ea)
- Monopolar Cautery Scissors Tip (disposable)	1Box(10ea)
- Monopolar Cautery Hook Tip (disposable)	1Box(10ea)
- Monopolar Cautery Spatula Tip (disposable)	1Box(10ea)
- Access Port Kit, Wound Retractor (2.7-4CM) (disposable)	1Box(6ea)
- Access Port Kit, Wound Retractor (2.7-7CM) (disposable)	1Box(6ea)
Warranty period: 90 days from Acceptance	
5. Vision Starter Kit	1Set
- EndoWrist Camera	4ea
Warranty period: One (1) year from the Acceptance.	
6. Language Specific Items	1Set
- Cleaning and Sterilization Kit	1ea