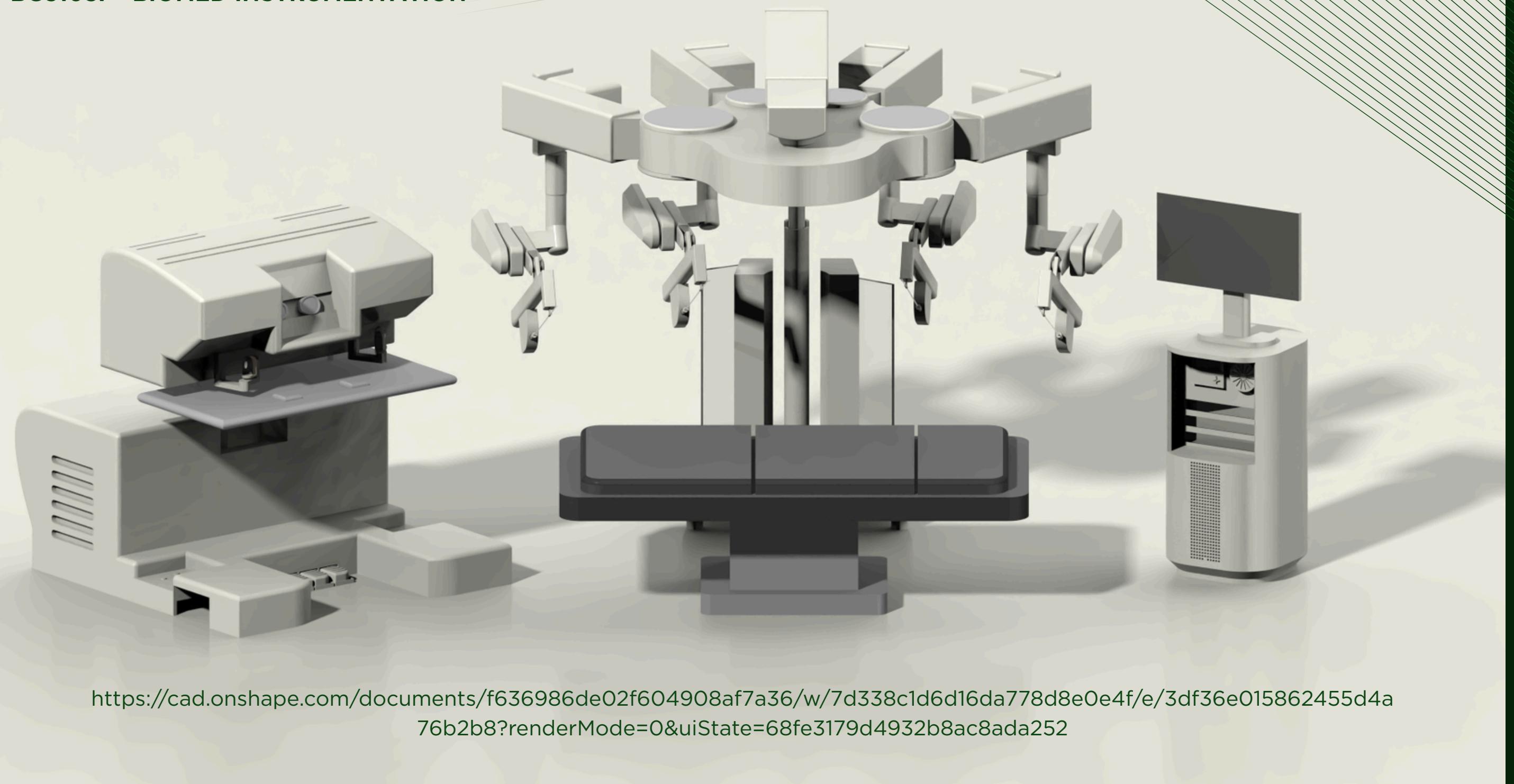


**NANYANG
TECHNOLOGICAL
UNIVERSITY
SINGAPORE**

SUPERVISOR: PUI TZE SIAN
BG3105: BIOMED INSTRUMENTATION



<https://cad.onshape.com/documents/f636986de02f604908af7a36/w/7d338c1d6d16da778d8e0e4f/e/3df36e015862455d4a76b2b8?renderMode=0&uiState=68fe3179d4932b8ac8ada252>

LISA

Precision in Every
Move

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WHAT IS LISA?

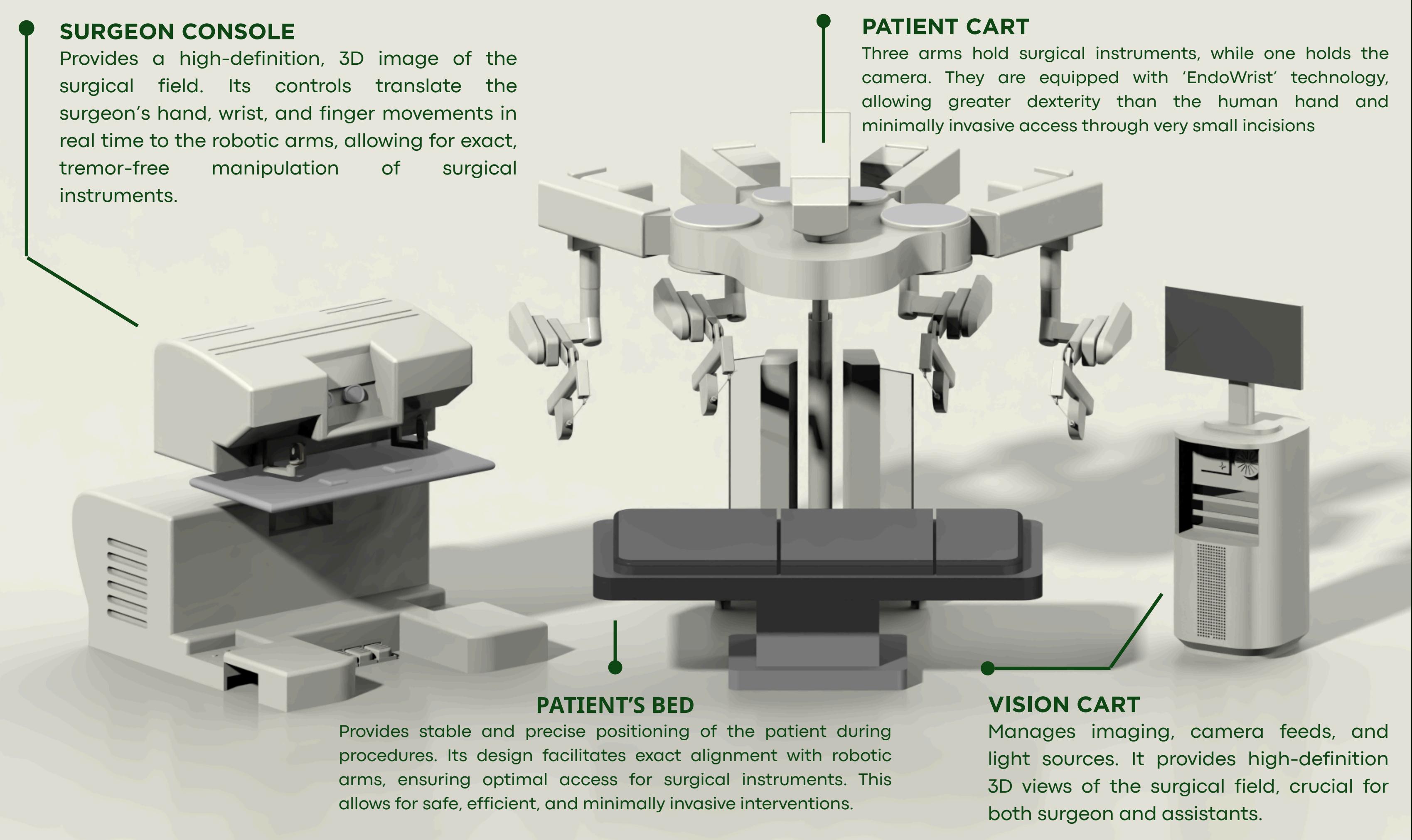
Lisa is a surgical system that functions as an advanced robotic platform designed for minimally invasive surgery, primarily focused on urology, gynecology, and advanced general surgery. It also facilitates access to complex anatomical areas. The system is composed of three fundamental parts: the surgeon console, the patient cart, and the vision cart.



ADVANTAGES

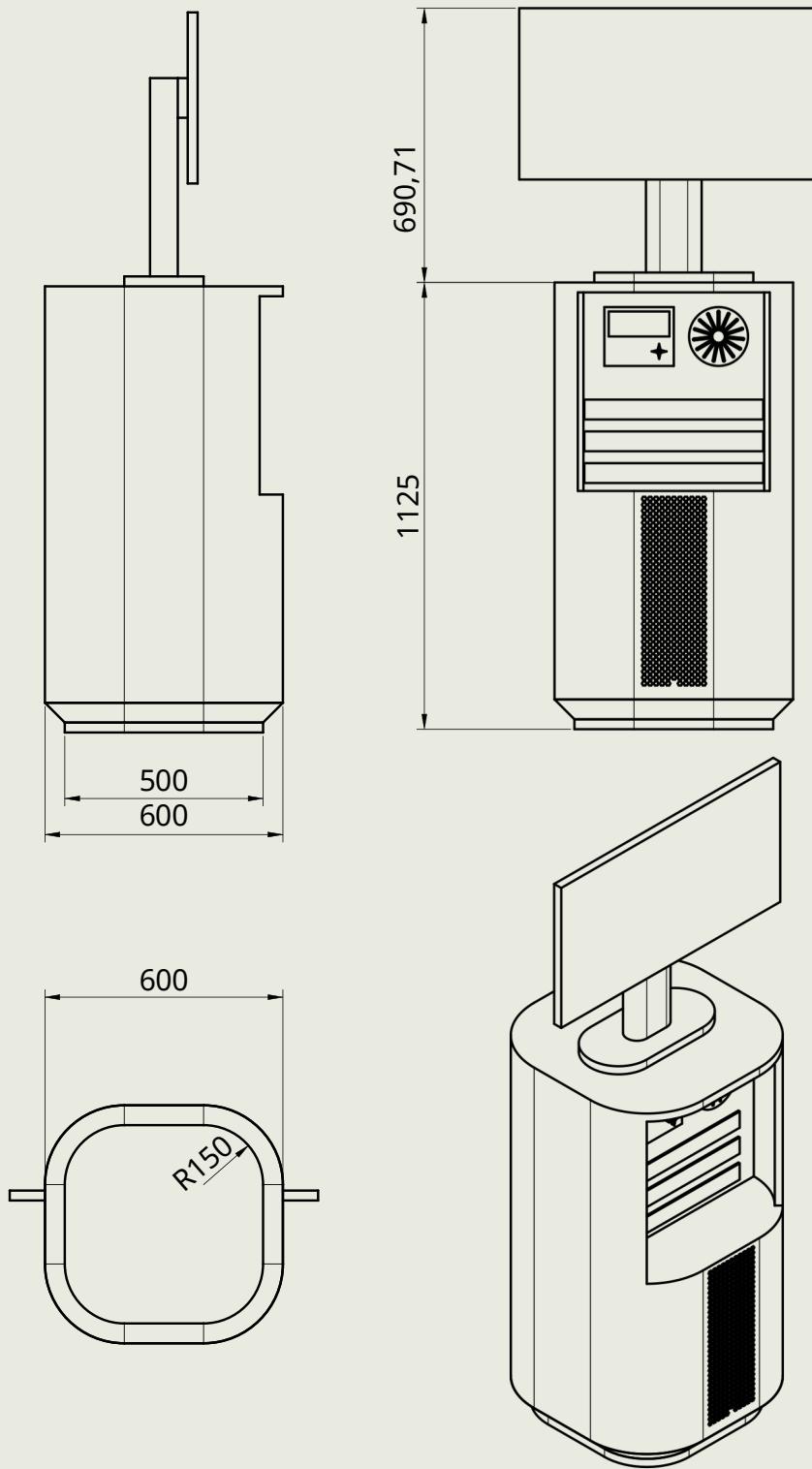
1. Enhanced precision and dexterity with robotic arms
2. Minimally invasive surgery with smaller incisions
3. Reduced bleeding, pain, and scarring
4. Shorter hospital stays and faster recovery
5. High-definition 3D visualization for improved accuracy
6. Safety features like tremor filtration and motion control
7. Access to hard-to-reach surgical areas

WORKING PRINCIPLE

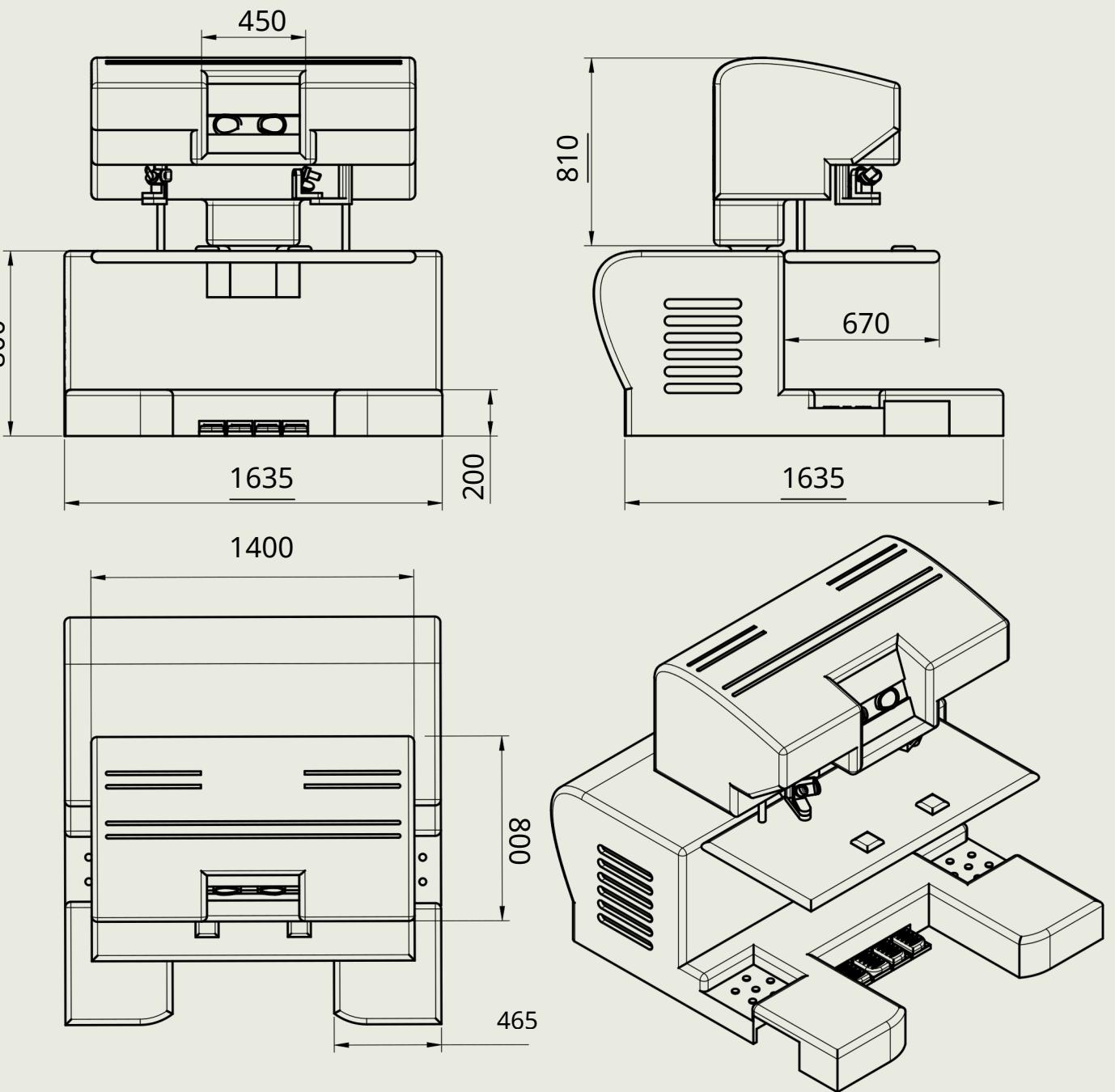


TECHNICAL DRAWINGS

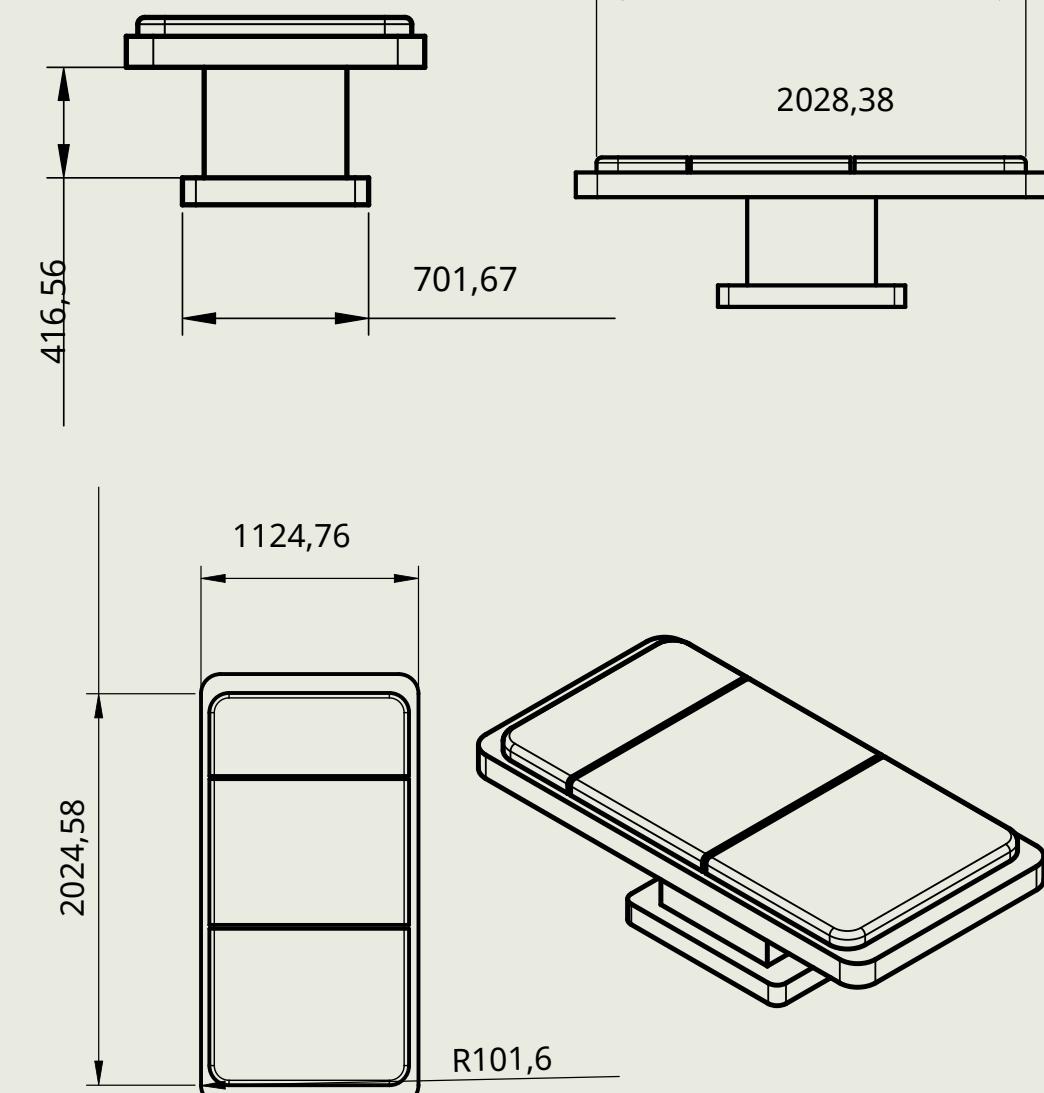
COMPUTER



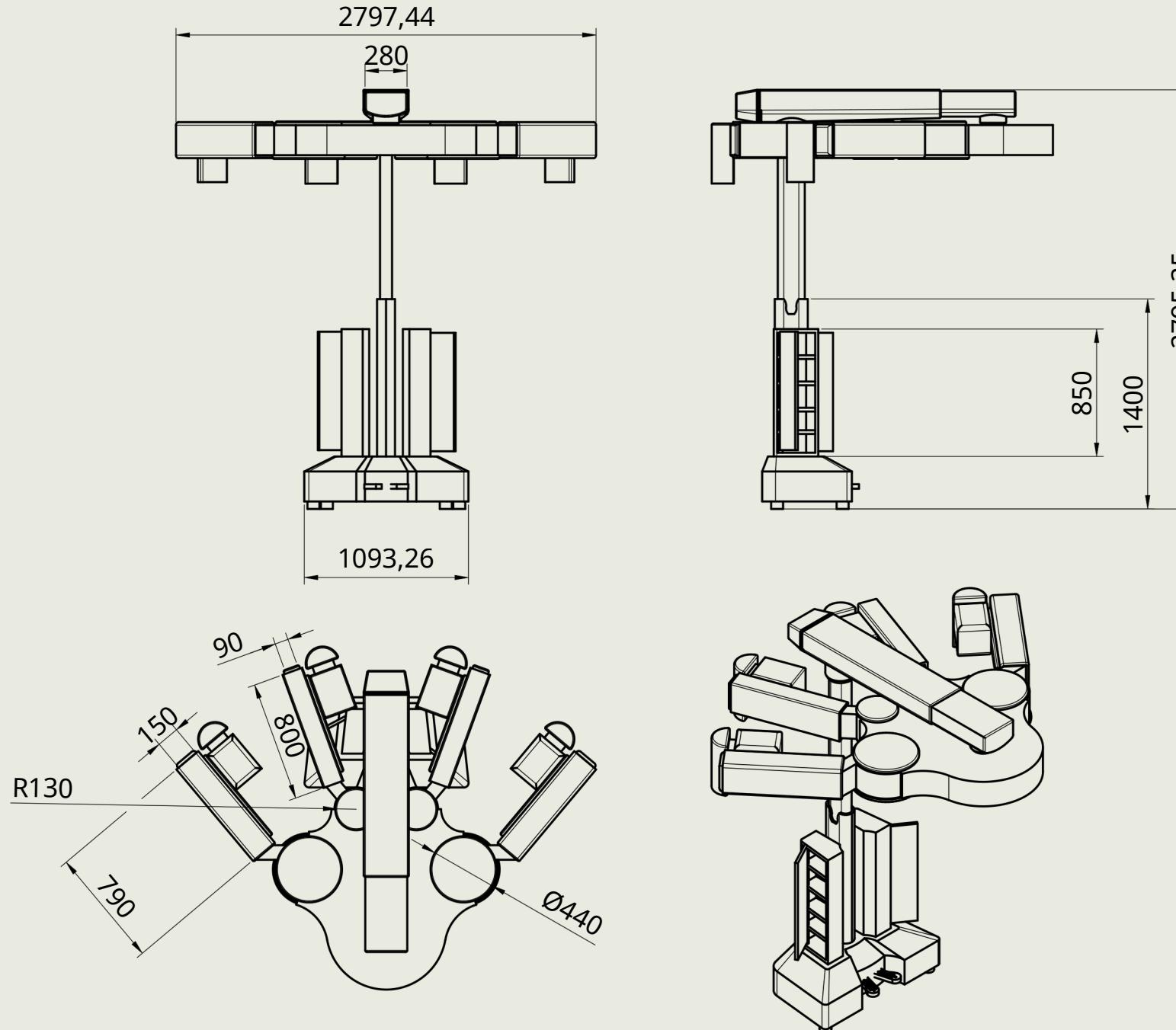
SURGEON'S CONSOLE



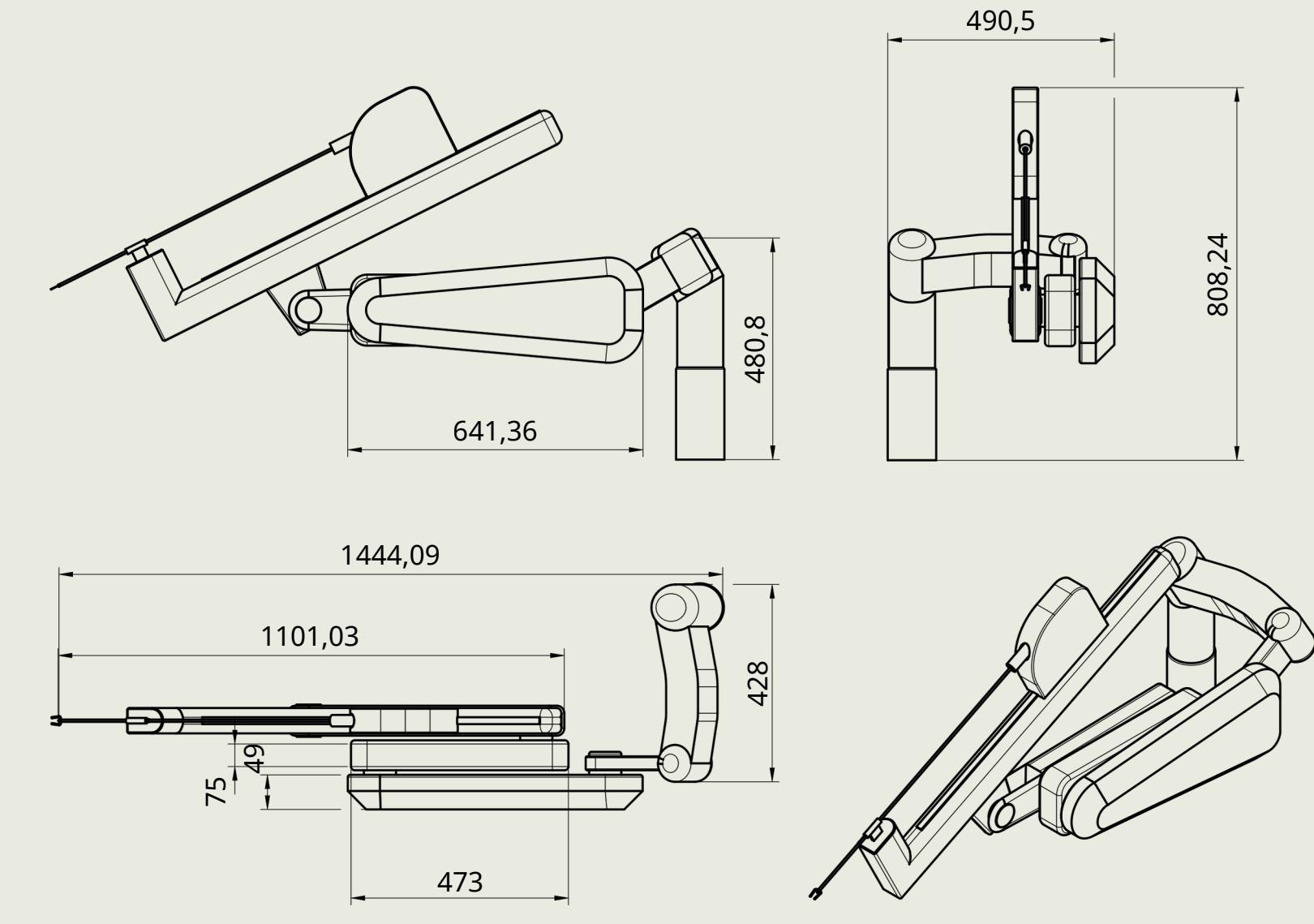
PATIENT'S BED



BASE AND SUPPORT



ROBOTIC ARM



PROJECT DISTRIBUTION

Chirapunam Sophia Umeh

Patient's bed

Carmen Rodríguez García

Robotic arms

Yuhang Weng

Robotic arms support and junction with the base

Alejandro López Lamata

Surgical robot base structure, computer and render

Qide Zhengzhao

Surgeon's console

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