

# — Medical Simulators




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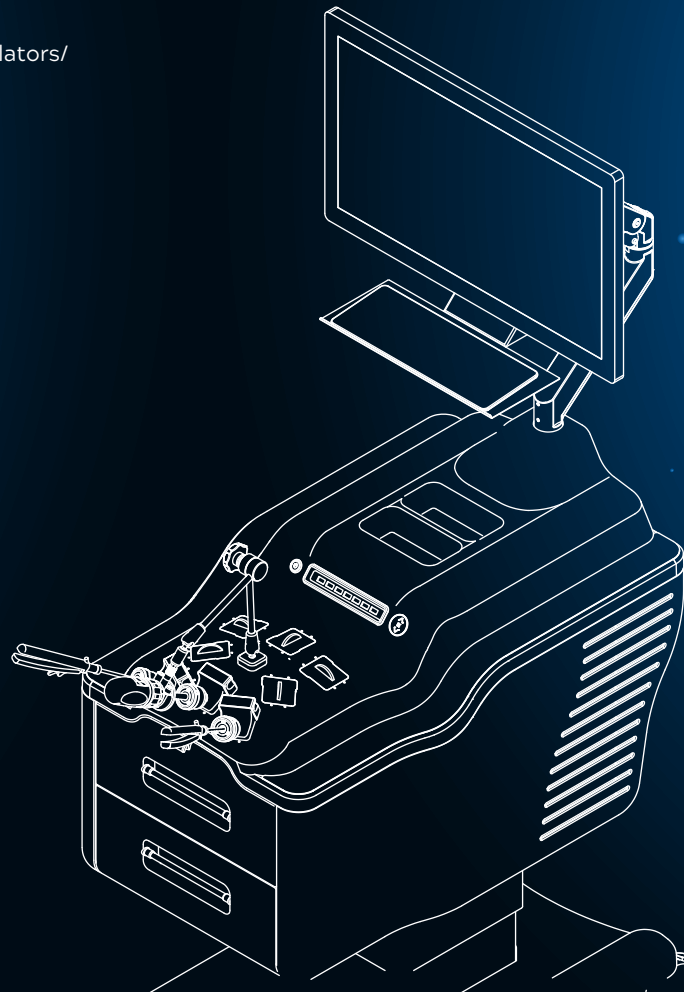
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A white wireframe sphere composed of many interconnected triangles, resembling a geodesic dome, set against a dark blue background with small white stars.

**ONE SIMULATOR**

A circular inset showing a vibrant cosmic nebula with swirling patterns of blue, purple, and white, set against a dark space background.

**TWO WORLDS**

# APEX

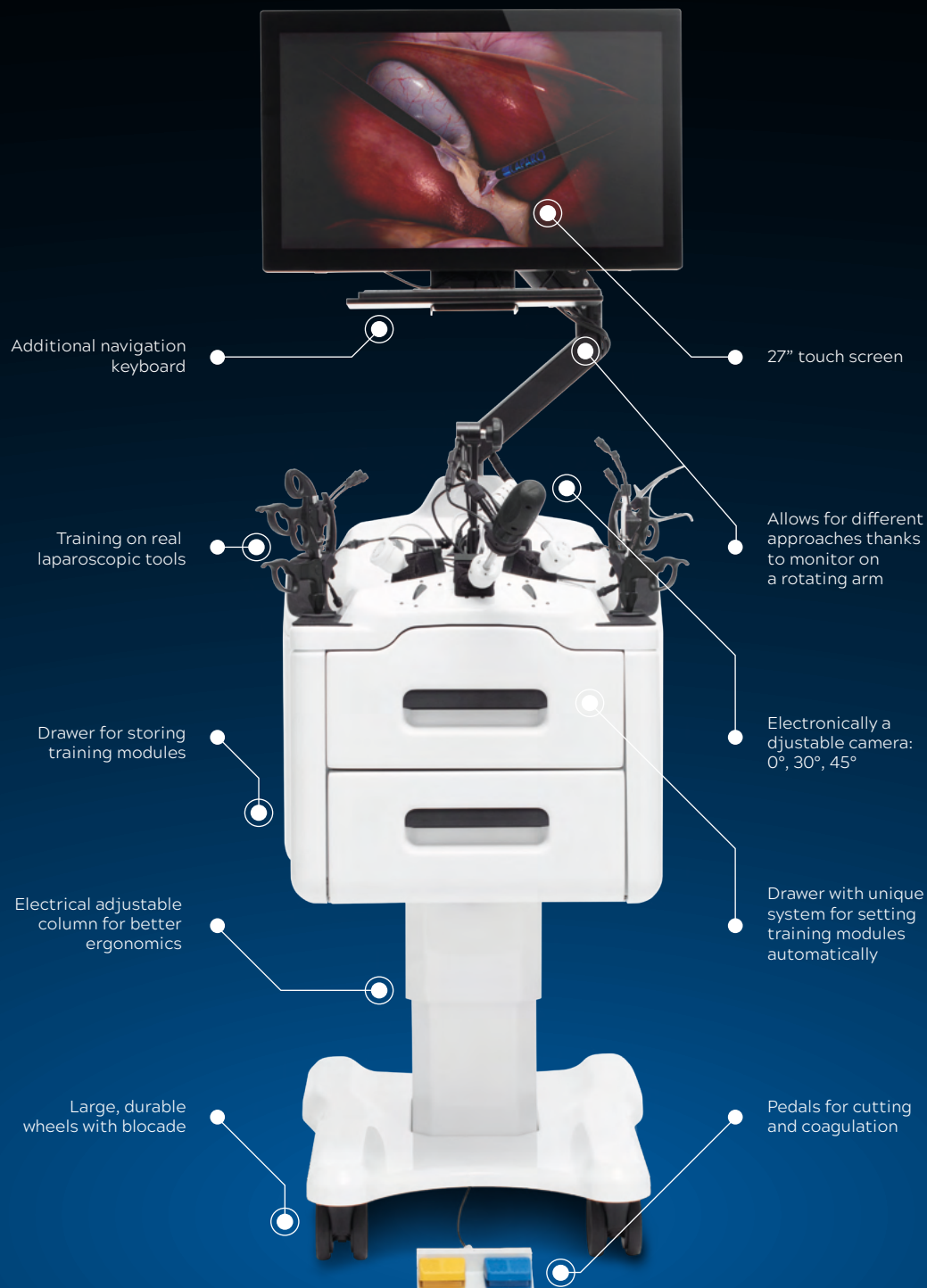
**COVID-19** has brought some very interesting challenges to the Medical Industry and forced educational institutions and doctors to seek for other unconventional teaching methods. As training procedures require a whole other approach method, LAPARO has launched a next-generation solution to overcome these challenges implementing **APEX - mixed reality laparoscopic simulator (VR and Real Training)**.

## Next-generation Virtual Reality

- Unmatched realism for enhanced training experience
- High fidelity graphics
- Cutting edge technologies of VR
- Ability to practice procedures
- Real instruments with advanced sensors
- Focus on safety of operations
- Possibility to learn electrosurgery safely

## Powerful Training Analysis

- Proficiency-based laparoscopic training
- Highest measuring precision
- Analysis of 13 parameters simultaneously: time, fluidity and economy of movement, instrument activity & visibility, hand coordination
- Additional advanced monitoring of errors during training procedures made in virtual reality
- The ability to recreate the full trajectory of the movement
- Debriefing view to see errors presented on the timeline
- Learning curve analysis



# Boost training effectiveness

## Advantages

- The combination of the features of physical training and VR
- Detailed analysis of parameters: traffic management, smooth movement, tool activity, tool visibility in the operating field and tool work symmetry
- User and administrative accounts
- Possibility to create a training group
- Network group work with a mentoring position
- Set includes high performance computer with 27" touch screen
- Training on real laparoscopic instruments

## Adjustable track vision

- Possibility of shifting the camera and placing it in 1 of 8 slots with a Magic Arm
- Electronically adjustable camera: 0°, 30°, 45° and from 0° to 70° with a knob
- Focus Ring with electronically adjustable brightness
- Precise fixation in a given position
- Possibility to work with an assistant without the use of fixation
- Full HD (1920x1080) camera resolution Zoom

## Real instruments

- Training in virtual reality conditions and on physical modules is performed on real clinical tools with embedded sensors
- Close-to-reality experience while training laparoscopic procedures on clinical instruments

