

Symani[®]
SURGICAL SYSTEM

Specification Sheet

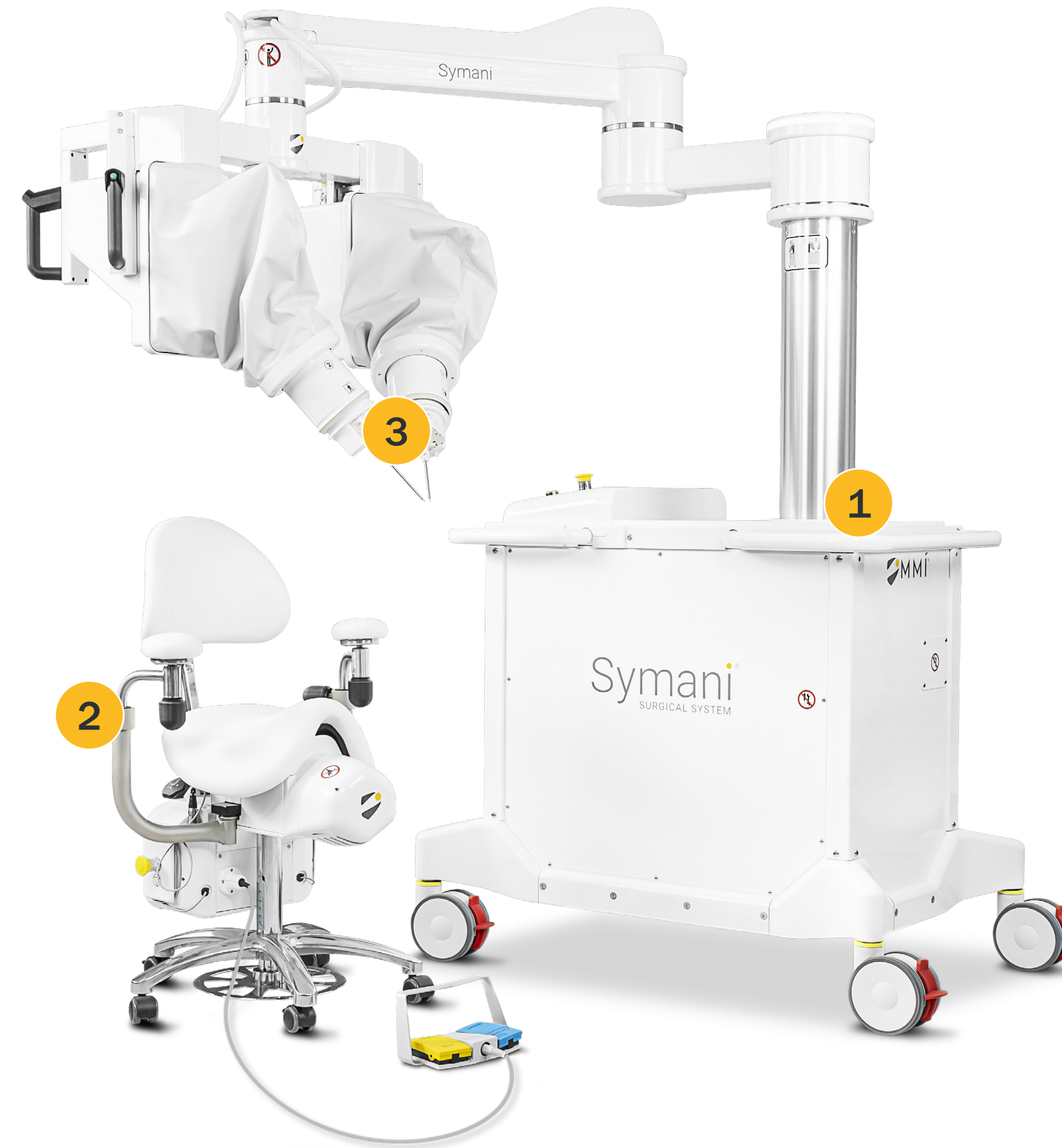


The Symani® Surgical System is a robotic platform designed to support microsurgical anastomosis, suturing, and ligation of blood vessels and lymphatic vessels during open surgical procedures. Symani uses principles of teleoperation to replicate and scale down surgeon movements and robotically drive miniaturized wristed surgical instruments.

The Symani Surgical System does not incorporate any dedicated optical magnification system. It is designed to be compatible with most microsurgical microscopes and exoscopes.



The **Symani Surgical System** consists of three main components:



CLICK ON BUTTONS to view details about system components

TECHNICAL SPECIFICATIONS

POWER SPECIFICATIONS		
	CMM	CONSOLE
Voltage	115/230 Vac @50/60 Hz	5 Vdc, 12 Vdc
Rating and Typical Current	Min 1.7 A @ 230 Vac Max 2.6 A @ 115 Vac	3.5 A @+12 Vdc 0.6 A @+5 Vdc
Safety Class	Ia	Ia
PHYSICAL DIMENSIONS		
	CMM	CONSOLE
Height Stowed	190 cm	96 cm
Maximum Height	210 cm	111.7 cm
Width	80 cm	74 cm
Depth	120 cm	62 cm
Weight	400 kg	30 kg

ENVIRONMENTAL SPECIFICATIONS: OPERATING CONDITIONS	
Temperature	10 to 30°C (50 to 86°F)
Humidity	10 to 85% non-condensing
Atmospheric Pressure	Symani functions properly in atmospheric pressures ranging from 80 kPa to 106 kPa, with a maximum altitude of 2000 m above sea level.
ENVIRONMENTAL SPECIFICATIONS: STORAGE AND TRANSPORT CONDITIONS	
Temperature	-10 to 55°C (14 to 131°F)
Humidity	5 to 95% non-condensing for transport 10 to 85% non-condensing for storage

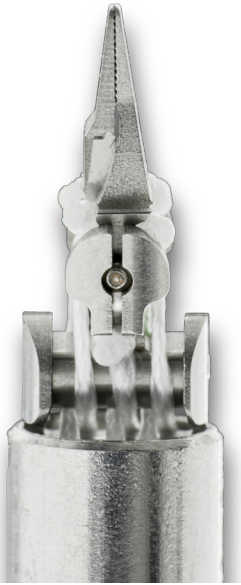
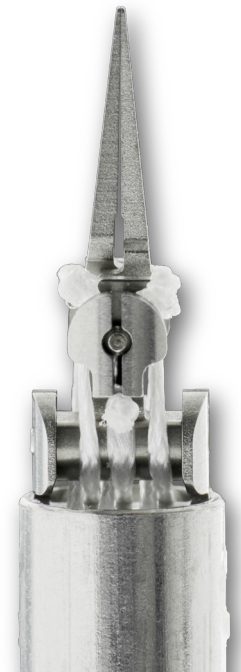
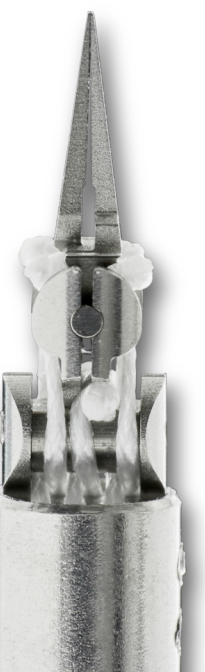


NANOWRIST INSTRUMENT SPECIFICATIONS

	MICRO INSTRUMENTS	SUPERMICRO INSTRUMENTS
RECOMMENDED SIZE COMPATIBILITY		
Vessels	>0.7 mm	<1.0 mm
Needles	70–150 um	50–100 um
Sutures	8–0 to 10–0	10–0 to 12–0
INSTRUMENT WIDTH		
Needle Holder*	0.5 mm	0.25 mm
Dilator	0.2 mm	0.1 mm
INSTRUMENT LENGTH		
Needle Holder Tip	4.5 mm	4.5 mm
Dilator Tip	6.5 mm	5.5 mm
WRIST DIAMETER		
	3.5 mm	3.0 mm



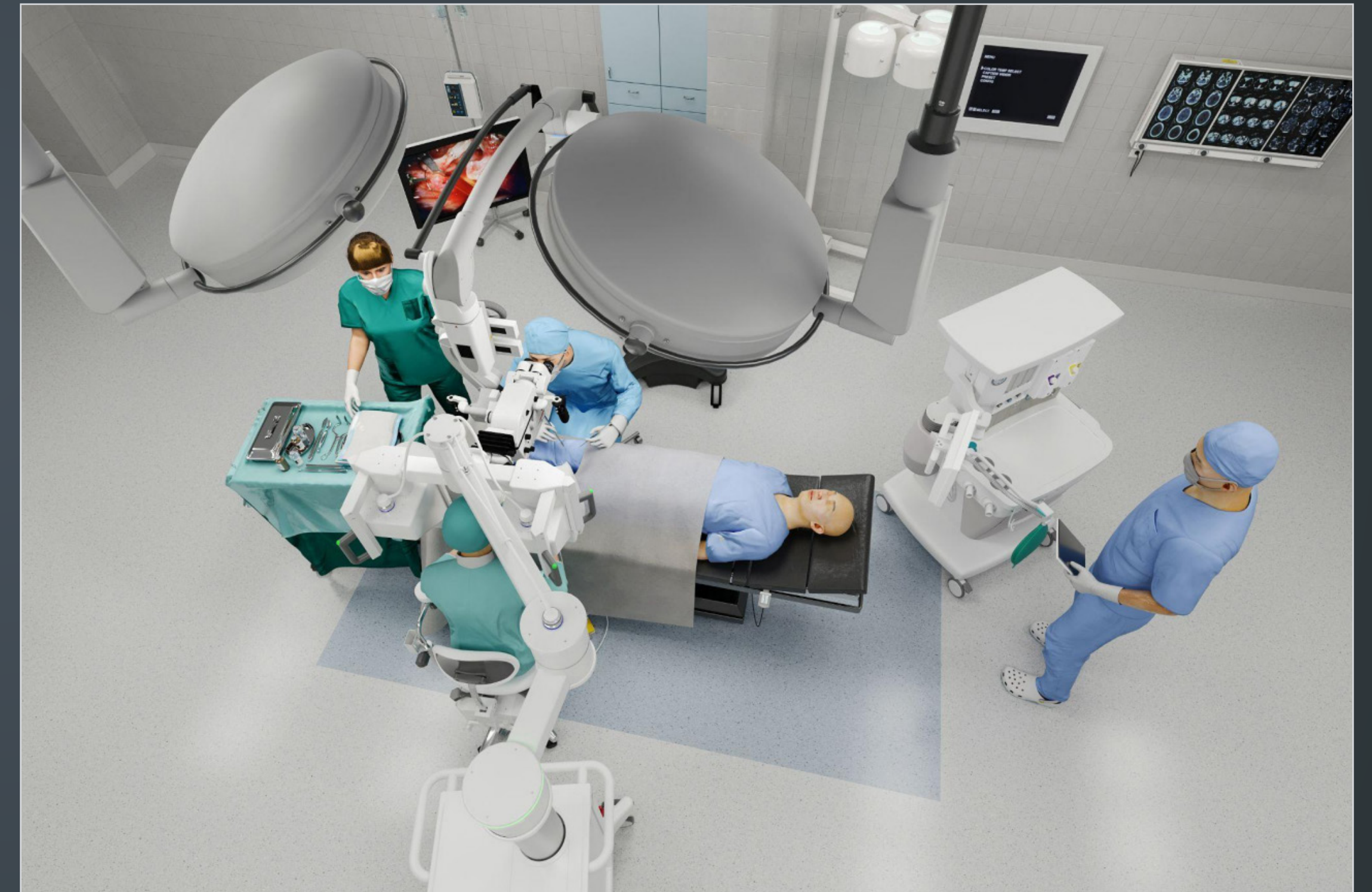
*Micro Needle Holder includes Suture Cut

	MICRO INSTRUMENTS	SUPERMICRO INSTRUMENTS
NEEDLE HOLDER		
DILATOR		

EXAMPLES OF CLINICAL SETTINGS AND SURGICAL TEAM POSITIONS

Symani Surgical System – **SPECIFICATION SHEET**

Traditional Microscope



EXAMPLES OF CLINICAL SETTINGS AND SURGICAL TEAM POSITIONS

Symani Surgical System – **SPECIFICATION SHEET**

Exoscope





The Symani Surgical System is authorized for use in the U.S. by the FDA and is a CE marked medical device. Consult your local representative to confirm availability in other geographies. For product indications specific to your region, visit www.mmimicro.com/indications.

Caution: Federal law restricts this device to sale by or on the order of a physician.



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