

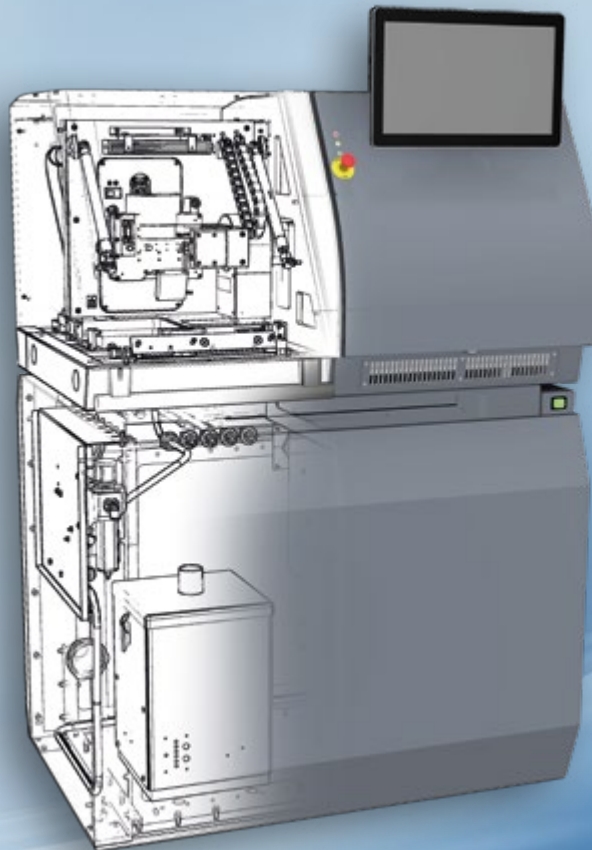
microPREP™ PRO

MACHINE SPECIFICATIONS

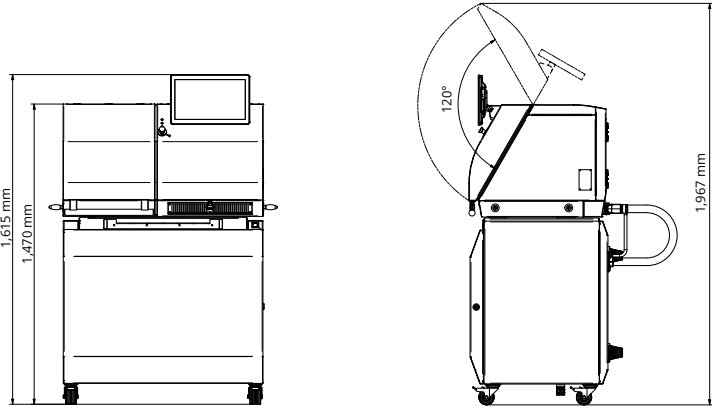
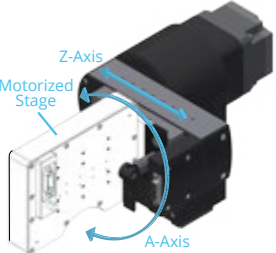

Main component of the microPREP™ PRO system is the ultra-short pulsed laser source that enables high ablation rates with great accuracy. microPREP™ PRO's excellent positioning system with piezo actuators as well as two cameras allow the user to bring specimens straightforwardly into the ultra-precise position for the desired preparation task. The integrated cleaning system prevents optical components from pollution, while the optional CO₂ Snow Jet removes debris from the sample surface within seconds.

TECHNICAL HIGHLIGHTS

- Compact design and laser class 1 (IEC 60825-1)
- Ultra-short pulsed laser
- Piezo-driven positioning system
- Overview and high resolution detail camera
- No warm-up phase - immediately usable
- Air cooled
- Powerful intuitive microPREP™ software



microPREP™ PRO - SYSTEM DETAILS

<p>Machine Dimensions</p>	<ul style="list-style-type: none"> • Height: 1,590 mm excl. rolls 1,615 mm incl. rolls • Width: 980 mm • Depth: 780 mm • Weight: 350 kg 	
<p>Laser Unit</p>	<ul style="list-style-type: none"> • Type: DPSS (diode pumped solid state) • Max. power: 3.0 W • Wavelength: 532 nm • Frequency: 20 - 70 kHz • Pulse duration: < 690 ps • Pulse energy (@ 20 kHz): up to 60 µJ 	<p>Scanner:</p> <ul style="list-style-type: none"> • Scanner with f-theta lens • Focal length: f = 100 mm • Scanning field: 45 mm x 45 mm • Spot diameter: < 12 µm
<p>Positioning System for Base/Retainer</p>	<p>Z-Axis (stage/fixture retainer):</p> <ul style="list-style-type: none"> • Travel distance: max. 25 mm • Positioning accuracy: 5 µm <p>A-Axis (rotational axis for Z):</p> <ul style="list-style-type: none"> • Working area around focal point up to 160° • Positioning accuracy (output side): 16 µrad (0.0009°) 	
<p>Camera and Vision System</p>	<p>Overview Camera:</p> <ul style="list-style-type: none"> • Field of view: 160 mm x 120 mm • Resolution: 1,100 pixel/mm • Auto-focus field covers working area completely 	<p>Process Camera:</p> <ul style="list-style-type: none"> • Field of view: 3.2 mm x 2.3 mm • Resolution: 3,840 x 2,748 px (11 Mpx) • Working distance: ~ 65 mm • Depth of field: ~ 30 µm absolute • Pixel size in picture: 0.835 µm/px • Frame rate: max. 6 f/s • Rolling shutter technologie
<p>Standards</p>	<ul style="list-style-type: none"> • CE (2006/42/EG, 2014/30/EU, 2014/35/EU) • IEC 61010-1 (UL 61010) • Semi S2 / Semi S8 (optional) 	

Requirements

<p>Electrical</p>	<ul style="list-style-type: none"> • Rated Voltage: 110 - 230 VAC • Frequency: 50/60 Hz • Power: 0.6 kW
<p>Ambient Conditions</p>	<ul style="list-style-type: none"> • Temperature: 18 to 24 °C (64 to 76 °F) • Temperature for maximum accuracy: 21 °C (70 °F) • Vibration class: Minimum VC-B
<p>Cleaning System</p>	<p>Standard:</p> <ul style="list-style-type: none"> • Compressed dry air supply: 5.5 - 6 bar • Consumption: up to 250 l/min (adjustable between 0 - 5 bar) • Compressed dry air quality: 1 (particle) - 1 (oil) - 4 (water) according to ISO 8573-1 <p>CO₂ Snow Jet (optional):</p> <ul style="list-style-type: none"> • Consumables: liquid CO₂ • Requires gas cylinder with siphon tube • Consumption: < 10 g per cleaning cycle