

# ERS AirCool Plus Thermal System for Summit


Temperature Ranges -55 to +200°C and -55 to +300°C




## Facility Planning Guide

This guide contains information to help prepare your facility for the arrival of your ERS AirCool Plus thermal system.

### Thermal System Requirements

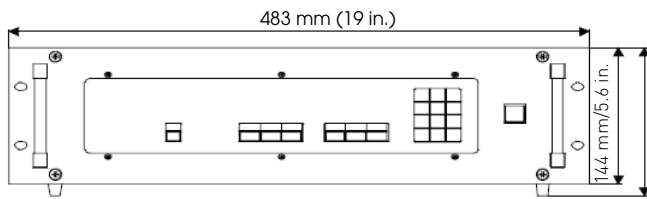
<b>General</b>	Site Requirements	<ul style="list-style-type: none"> <li>• A flat, level floor which is strong enough to bear the weight of the equipment</li> <li>• Minimal mechanical vibrations</li> <li>• Well-ventilated and without exposure to direct sunlight</li> <li>• Near to power and drainage facilities</li> <li>• Not exposed to combustible or corrosive gases</li> <li>• The thermal system should be positioned on the left side of the station due to the length of the thermal hose and cable connection length. Longer thermal hose and cables are available, but may affect performance.</li> </ul>
	Seismic restraints	In order to use the seismic restraints, 4 anchor bolts must be embedded in the floor at the customer site, positioned to match the dimensions shown in diagram below.
<b>Air</b>	Compressed air requirements	<ul style="list-style-type: none"> <li>• Volume: Max. 380 liters/minute (13.4 SCFM) required, at standard atmospheric pressure and temperature. (Note: This pressure and volume are required to meet full system specifications. Lower pressures and flows will increase transition times and may affect the minimum temperature.)</li> <li>• Pressure: 0.6 Mpa, 87 psi; minimum supply pressure while at full flow</li> <li>• Dew point: <math>\leq -45\text{C}</math></li> <li>• Temperature: <math>\leq +26\text{C}</math></li> <li>• Purity: 99.9%, 3<math>\mu\text{m}</math> filtered</li> <li>• Residual oil volume: 0.01 mg/m<sup>3</sup> @ 20°C and 0.7 Mpa</li> </ul> <p><b>WARNING</b></p> <p> Cascade Microtech does not endorse or recommend using nitrogen instead of CDA for thermal system operation with any Cascade Microtech system due to the risk of oxygen depletion in the working environment.</p> <p><i>If your testing configuration requires the use of nitrogen instead of CDA for MicroChamber purge, time in Quick Purge mode should be controlled. Discuss your setup with your safety and facilities departments to ensure that the oxygen flow in your working environment is adequate to dissipate any nitrogen build up. The use of oxygen sensor alarms is also recommended.</i></p> <p><i>For MicroChamber purge requirements, refer to your probe station Facility Planning Guide.</i></p>
<b>Environmental Conditions</b>	Temperature	<ul style="list-style-type: none"> <li>• Ambient temperature: +18°C to +28°C</li> <li>• Temperature range (TS-212-07P): -55 to +200°C</li> <li>• Temperature range (TS-212-14P): -55 to +300°C</li> </ul>
	Humidity	Relative humidity: 20% to 60%

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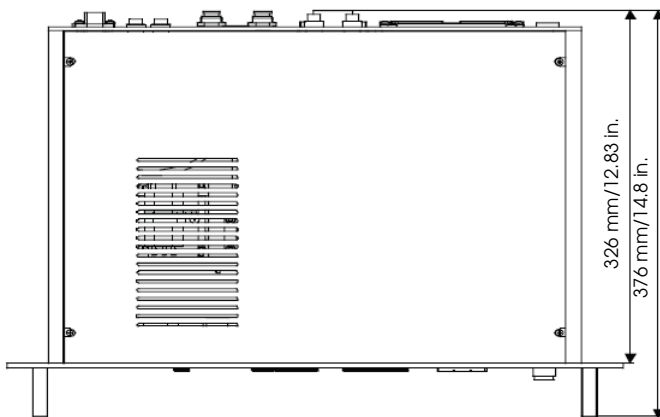
<b>Power</b>	Mains supply	<ul style="list-style-type: none"> <li>• 200/230V, 50/60H</li> </ul>
	Controller	<ul style="list-style-type: none"> <li>• 200 V through 230 V AC, 50/60 Hz</li> <li>• 530 VA</li> </ul>
	Chiller	<ul style="list-style-type: none"> <li>• 200 V through 230 V AC, 50/60 Hz</li> <li>• 2300 VA</li> </ul>
	North American style plugs (contact a Cascade Microtech representative for details on what type of plug is appropriate for your facility configuration.)	<ul style="list-style-type: none"> <li>• 200-220V</li> </ul>  <p><b>NEMA L6-20</b></p>
<b>Coolant</b>		Clean, dry air
<b>Communications</b>		RS-232 or IEEE 488
<b>Dimensions</b>	Controller	<ul style="list-style-type: none"> <li>• 483 mm/19 in. (W) x 376 mm/14.8 in. (D) x 144 mm/5.6 in. (H)</li> </ul>
	Chiller	<ul style="list-style-type: none"> <li>• 422 mm/16.6 in. (W) x 490 mm/19.29 in. (D) x 933 mm/36.73 in. (H)</li> </ul>
<b>Weight</b>	Controller	<ul style="list-style-type: none"> <li>• 10 Kg (22-pound)</li> </ul>
	Chiller	<ul style="list-style-type: none"> <li>• 150 Kg (330-pound)</li> </ul>
	Lifting requirements	Generally, two people are required to roll the chiller from the cart.
<b>Shipping Dimensions and Weight</b>	Chuck (if standalone)	<ul style="list-style-type: none"> <li>• 590 mm/23.22 in. (W) x 900 mm/35.43 in. (D) x 660 mm/25.98 in. (H)</li> </ul>
	Controller with Chiller	<ul style="list-style-type: none"> <li>• 620 mm/24.4 in. (W) x 900 mm/35.43 in. (D) x 1230 mm/48.42 in. (H)</li> <li>• Weight: 220 Kg (485-pound)</li> </ul>

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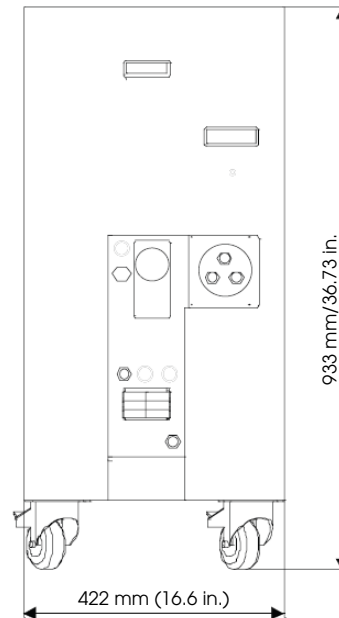
Controller front view



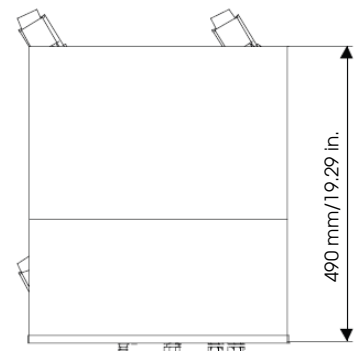
Controller top view



Chiller front view



Chiller top view



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