

Cascade Microtech Thermal System for Elite 300

Temperature Range -50°C to +300°C

Facility Planning Guide



This guide contains information to help prepare your facility for the arrival of your Cascade Microtech thermal system.

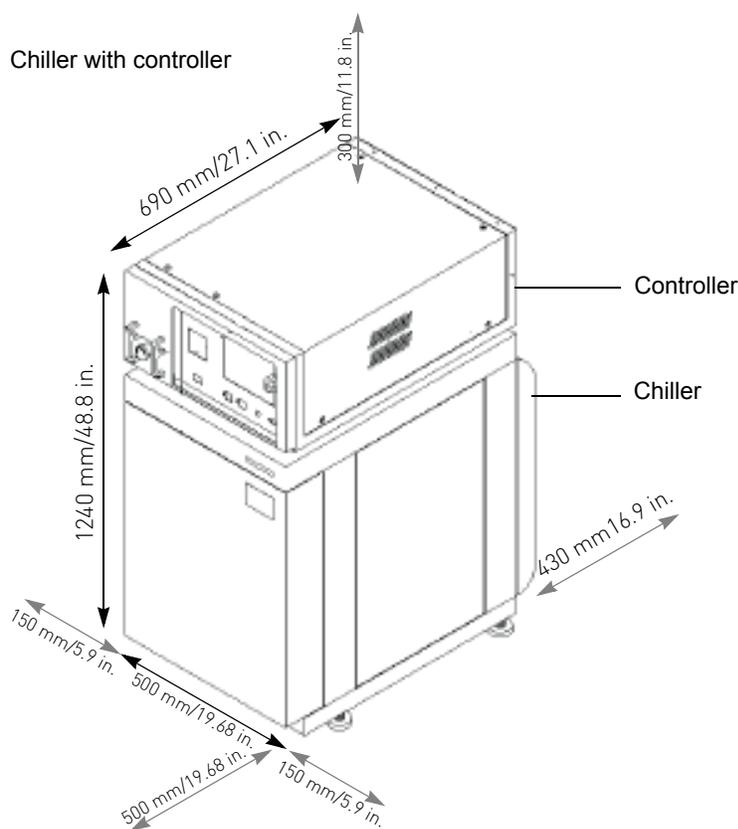
Thermal System Requirements

Air	<p>Compressed air requirements</p> <ul style="list-style-type: none"> • Volume: Max. 360 liters/minute (12.7 SCFM) recommended, at standard atmospheric pressure and temperature. • Pressure: 0.6 Mpa (87 psi); minimum supply pressure while at full flow • Dew point: $\leq -70^{\circ}\text{C}$ • Temperature: $\leq +26^{\circ}\text{C}$ • Purity: 99.9% apply to 3 μm <p>WARNING</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>
Environmental Conditions	<p>Temperature, station</p> <ul style="list-style-type: none"> • Ambient temperature: +18°C to +28°C • Relative humidity: 20% to 60% • Temperature range: -50°C to +300°C • Temperature sensor: PT100, 4-line wired • Thermo device: Air/Heater • Temperature repeatability: $\pm 0.2^{\circ}\text{C}$ <p>Temperature, controller</p> <ul style="list-style-type: none"> • Smallest temperature preselection step: $\pm 0.1^{\circ}\text{C}$ • Chuck temperature display resolution: 0.1°C <p>Temperature, chiller</p> <ul style="list-style-type: none"> • Refrigeration capability: air down to -80°C • Refrigeration system: two-phase refrigerating machine
Power	<p>Mains supply</p> <ul style="list-style-type: none"> • 200/230V, 50/60Hz <p>System total</p> <ul style="list-style-type: none"> • 3500VA <p>Controller</p> <ul style="list-style-type: none"> • 200/230 VAC, 50/60 Hz <p>Chiller</p> <ul style="list-style-type: none"> • 200 V through 230 V AC, 50/60 Hz, 2300 VA <p>North American style plugs (contact a Cascade Microtech representative for details on what type of plug is appropriate for your facility configuration.)</p> <ul style="list-style-type: none"> • 200 - 220V 
Coolant	<p>Clean, dry air</p>
Communications	<p>RS-232 or IEEE 488</p>

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Dimensions	Controller	• 500 mm/19.68 in. (W) x 635 mm/25 in. (D) x 240 mm/9.4 in. (H)
	Controller Rack	• 19 inch rack 5HE
	Chiller	• 500 mm/19.68 in. (W) x 690 mm/27.1 in. (D) x 1000 mm/39.37 in. (H)
Weight	System	• Approx. 200 kg (441-pound)
	Controller	• 35 kg (77-pound)
	Chiller	• 160 kg (353-pound)
	Lifting requirements	Generally, two people are required to roll the chiller from the cart.
Shipping Dimensions	Chuck	• 1143 mm/45 in. (W) x 660 mm/26 in. (D) x 406 mm/16 in. (H)
	Controller and Chiller	• 1346 mm/53 in. (W) x 762 mm/30 in. (D) x 1448 mm/57 in. (H) • Weight 340 kg (750-pound)

Black arrows represent thermal system dimensions.
Gray arrows represent additional clearance required.



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Cascade Microtech, Inc.
Corporate Headquarters
toll free: +1-800-550-3279
phone: +1-503-601-1000
email: cmj_sales@cmicro.com

Germany
phone: +49-89-9090195-0
email: cmg_sales@cmicro.com

Japan
phone: +81-3-5615-5150
email: cmj_sales@cmicro.com

China
phone: +86-21-3330-3188
email: cmc_sales@cmicro.com

Singapore
phone: +65-6873-7482
email: cms_sales@cmicro.com

Taiwan
phone: +886-3-5722810
email: cmt_sales@cmicro.com

