

Cascade Microtech, Inc.

SPECIFICATION SHEET



Advanced accuracy, precision and performance in an ultra-efficient measurement environment

Elite 300™

The next step in 300mm probing

At a glance, you'll notice its ultra-efficient, ergonomic design. Upon further inspection, you'll discover exactly why the Elite300 is essential for characterizing devices of the 32 μm technology node and beyond. Featuring next-generation, PureLine II™ performance, the Elite300 is the world's lowest-noise probe station. New AttoGuard®/MicroChamber® capabilities vastly improve low-leakage, low-capacitance measurements. An advanced linear-air stage provides unprecedented stepping accuracy and wafer planarity across the industry's widest available temperature range of -60 °C to 300 °C. Additionally, the Elite300 features a new "hands-free," high-stability microscope bridge mount and delivers true optical magnification with eVue™.



PLATFORM SPECIFICATIONS

MECHANICAL PERFORMANCE

X-Y Stage

Travel	301 mm x 301 mm (11.9 in. x 11.9 in.)
Resolution	0.1 μm (0.004 mils)
Repeatability	$\leq 1 \mu\text{m}$ (0.04 mils)
Accuracy	Precision mode: $\leq 0.3 \mu\text{m}$ (0.012 mils), Standard mode: $\leq 2 \mu\text{m}$ (0.08 mils)
Speed	100 mm/sec (4 in./sec)
Bearings	Air
Motor-drive system	Brushless linear servo motor
Feedback system	Ceramic ultra-low thermal expansion linear encoder

Z Stage

Travel	10.0 mm (.39 in.)
Resolution	0.1 μm (0.004 mils)
Repeatability	$\leq 1 \mu\text{m}$ (0.04 mils)
Accuracy	$\leq 2 \mu\text{m}$ (0.08 mils)
Speed	20 mm/sec (0.8 in./sec)
Lifting capacity	$\geq 20 \text{ kg}$ (44 lb.)
Probe-force deflection (measured at the chuck edge)	$\leq 0.001 \mu\text{m}/\mu\text{m}$ slope per 10 kg load (0.001 in./in. / 22 lb)

MECHANICAL PERFORMANCE CONTINUED

Theta Stage

Travel	$\pm 7.5^\circ$
Resolution	0.65 μm (0.03 mils)*
Repeatability	$\leq 1 \mu\text{m}$ (0.04 mils)*
Accuracy of standard moves	$\leq 2 \mu\text{m}$ (0.08 mils)*
Accuracy of large moves	$\leq 5 \mu\text{m}$ (0.20 mils)*

* Measured at edge of 300 mm chuck

PHYSICAL DIMENSIONS

Station Platform

Station dimensions	128 cm (W) x 120 cm (D) x 165 cm (H) (51 in. x 47 in. x 65 in.)
Platen-to-eyepieces	32 cm (13 in.)
Weight	1,090 kg (2,400 lbs.)

Height Options

Height kit – Standard	Standard height for Elite300 with floor-to-platen height of 103 cm (41 in.)
Height kit – Low-profile	Lowers Elite300 by 127 mm (5.0 in.) for floor-to-platen height of 93 cm (36 in.)

MICROCHAMBER

Electrical	ELITE300/AP	ELITE300/M
EMI shielding	> 30 dB (typical) > 1 KHz	> 20 dB (typical) > 1 KHz
Light attenuation	≥ 120 dB	≥ 120 dB
Spectral noise floor	≤ -170 dBVrms/rtHz (≤ 1 MHz) *	≤ -150 dBVrms/rtHz (≤ 1 MHz) **
System AC noise	≤ 5 mVp-p (≤ 1 GHz)***	≤ 20 mVp-p (≤ 1 GHz) **

* Test setup uses triaxial thermal chuck, 50 Ω termination, high-quality LNA, and DSA/DSO instrument

** Typical results. Actual values depend on probe/test setup

*** Test setup: Station power ON, Thermal system ON (40° C), MicroChamber closed. Instrument setup: Time domain digital scope (DC to 1 GHz), 50 Ω input impedance, cable to chuck BNC connector. Measurement: Peak-Peak Noise Voltage (acquire 1000 data points, and calculate mean of Vp-p data).

Air-Purge Management

Purge	Dry air or nitrogen
Purge control	Manual or automatic (software controlled)
Purge flow rate – Standard	0 to 1.9 liters/sec (0 to 4 SCFM)
Purge flow rate – Quick purge	> 1.9 liters/sec (4 SCFM)

PLATEN SYSTEM

Platen

Dimensions	101.6 cm (W) x 86.4 cm (D) x 25 mm (T) (40.0 in. x 34.0 in. x 1.0 in.)
Mounting system	Kinematic, thermally optimized
Platen-to-chuck height	40.0 \pm 0.5 mm (1.575 \pm 0.02 in.)
Lift range	3.0 mm (0.12 in.)
Lift repeatability	$\leq 3 \mu\text{m}$ (0.12 mils)
Accessory mounting	Universal Rail System: 53 cm (21 in.) Left / Right Rail, 71 cm (28 in.) Top Rail

Platen Ring

Diameter	717.6 mm (28.25 in.)
Weight	43 kg (95 lb.)
Material	Steel for magnetic positioners
Surface finish	Fine ground for vacuum positioner high stability
Usability features	Removable and clockable in 90 °

Platen Ring Insert

Diameter	342.9 mm (13.5 in.)
Standard interface	Probe-card holders and custom adapters

WAFER CHUCK

Diameter	305 mm (12 in.)
Material	Nickel- or gold-plated aluminum
DUT sizes supported	Shards or wafers 50 mm (2 in.) through 300 mm (12 in.)
Vacuum rings	50 mm, 130 mm, 180 mm, 280 mm (1.97 in., 5.12 in., 7.09 in., 11.02 in.)
Vacuum-ring actuation	Software controlled
Planarity	≤ 10 μm (0.39 mils) @ 25 °C
	≤ 30 μm (1.2 mils) @ -60 °C
	≤ 30 μm (1.2 mils) @ 200 °C
	≤ 40 μm (1.6 mils) @ 300 °C

PLATFORM
General

Attenuation of the vibration dampening system	≥ 0 dB @ 6 Hz, 5 dB per octave @ 6 Hz to 48 Hz, ≥ 15 dB above 48 Hz*
Stage move time	≤ 0.75 sec (200 μm Z down – 1000 μm X-Y – 200 μm Z up)
Stage dampening	≥ 15 dB in less than 1500 msec

Communication Ports

Type	Qty	Location	Notes
USB 2.0	2	Side of Station	For quick access to USB devices
USB 2.0	4	Rear connection panel	For security keys and USB instrument control
RS232	4	Rear connection panel	For instrument control (thermal, LASER, microscope, etc)
GPIB IEEE 488.2	1	Rear connection panel	For test instrument control

Accessory Interface Ports

Port	Qty	Location	Notes
EDGE	1	Rear connection panel	Probe card contact sense
VNA-CAL	1	Rear connection panel	Control for switched GPIB (remote/local software control)
INKER	1	Rear connection panel	Control for die inker
ULC	1	Rear connection panel	Control for upward looking camera

Switched ACAC Power

Port	Qty	Location	Notes
IEC (f) Microscope	1	Rear connection panel	Software ON/OFF control for Microscope light
IEC (f) Aux	1	Rear connection panel	Software ON/OFF control for Auxiliary power

* Due to the sensitivity of measurements to vibrations, the Elite300 is equipped with a high-performance active vibration dampening system. However, unacceptable equipment vibrations can occur when the floor vibrations are high. For this reason the Elite300 must be used in an environment having background vibrations at or below the Operating Theatre level. This corresponds to a maximum level of 4000 micro-inches / sec (72 dB), measured using the 1/3-octave-band velocity spectra method (expressed in RMS velocity as specified by The International Standards Organization [ISO]). For further information, and technical solutions with environments using raised floors, please see the Cascade Microtech Stations Facilities guide.

NON-THERMAL CHUCKS

Note: Results measured with non-thermal chuck at standard probing height (10,000 μm) with chuck in a dry environment. Moisture in the chuck may degrade performance.

FemtoGuard® Chuck Performance

Breakdown voltage	Force-to-guard	$\geq 500 \text{ V}$
	Guard-to-shield	$\geq 500 \text{ V}$
	Force-to-shield	$\geq 500 \text{ V}$
Resistance	Force-to-guard	$\geq 5 \text{ e}^{12} \Omega$
	Guard-to-shield	$\geq 1 \text{ e}^{12} \Omega$
	Force-to-shield	$\geq 5 \text{ e}^{12} \Omega$
Capacitance	Force-to-guard	$\leq 800 \text{ pF}$
	Guard-to-shield	$\leq 4000 \text{ pF}$

Coaxial Chuck Performance

Breakdown voltage	$\geq 500 \text{ V}$
Isolation	$\geq 5 \text{ e}^{12} \Omega$
Capacitance	800 pF

System Electrical Performance (w/ non-thermal chuck)

	ELITE300/AP FEMTOGUARD CHUCK	ELITE300/M	ELITE300/M COAX CHUCK
Probe leakage*	$\leq 1 \text{ fA}$	$\leq 1 \text{ fA}$	$\leq 1 \text{ fA}$
Chuck leakage*	$\leq 1 \text{ fA}$	$\leq 15 \text{ fA}$	$\leq 600 \text{ fA}$
Residual capacitance	$\leq 0.4 \text{ pF}$	$\leq 75 \text{ pF}$	N/A
Capacitance variation**	$\leq 2 \text{ fF}$	$\leq 75 \text{ fF}$	$\leq 75 \text{ fF}$
Settling time***	$\leq 25 \text{ fA @ 2 sec}$	$\leq 100 \text{ fA @ 2 sec}$	n/a

* Overall leakage current is comprised of two distinctly separate components: 1) offset, and 2) noise. Offset is the DC value of current due to instrument voltage offset driving through isolation resistance. Noise is low frequency ripple superimposed on top of offset and is due to disturbances in the probe station environment.

Noise and leakage are measured with a 4156C NOISE.dat CMI program or equivalent; 4ms sample rate, auto scale, 1nA compliance, 1 NPLC integration.

** This is chuck capacitance variation based upon chuck position anywhere in the 300 mm area, as measured by a stationary DC probe. Test conditions: Agilent 4284A LCR meter (Cp-d, 1 Mhz, 4 Ave, 0 Power), DCP-150, 75 μm above chuck surface, 4-wire connection (HiZ/Hipot to chuck, Loz/Lopot to probe).

*** Settling time is measured with a 4156C SETLB.dat CMI program or equivalent; 2 ms sampling rate, limited auto 1 nA, 1 μA compliance, 3 NPLC integration.

THERMAL CHUCKS

Note: Results measured with thermal chuck at standard probing height (10,000 μm) with chuck in a dry environment. Moisture in the chuck may degrade performance.

FemtoGuard Chuck Performance

		THERMAL CHUCK			
		@ -60° C	@ 25° C	@ 200° C	@ 300° C
Breakdown Voltage	Force-to-guard	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$
	Guard-to-shield	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$
	Force-to-shield	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$
Resistance	Force-to-guard	$\geq 5 \text{ e}^{12} \Omega$	$\geq 5 \text{ e}^{12} \Omega$	$\geq 5 \text{ e}^1 \Omega$	$\geq 1 \text{ e}^{11} \Omega$
	Guard-to-shield	$\geq 5 \text{ e}^{11} \Omega$	$\geq 5 \text{ e}^{11} \Omega$	$\geq 1 \text{ e}^{10} \Omega$	$\geq 1 \text{ e}^9 \Omega$
	Force-to-shield	$\geq 5 \text{ e}^{12} \Omega$	$\geq 5 \text{ e}^{12} \Omega$	$\geq 5 \text{ e}^{11} \Omega$	$\geq 1 \text{ e}^{11} \Omega$
Capacitance	Force-to-guard	$\leq 1000 \text{ pF}$	$\leq 1000 \text{ pF}$	$\leq 1000 \text{ pF}$	$\leq 1000 \text{ pF}$
	Guard-to-shield	$\leq 5000 \text{ pF}$	$\leq 5000 \text{ pF}$	$\leq 5000 \text{ pF}$	$\leq 5000 \text{ pF}$

Coaxial Chuck Performance

		THERMAL CHUCK			
		@ -60° C	@ 25° C	@ 200° C	@ 300° C
Breakdown voltage		$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$	$\geq 500 \text{ V}$
Resistance		$\geq 5 \text{ e}^{11} \Omega$	$\geq 5 \text{ e}^{11} \Omega$	$\geq 1 \text{ e}^{10} \Omega$	$\geq 1 \text{ e}^9 \Omega$
Capacitance		$\leq 5000 \text{ pF}$	$\leq 5000 \text{ pF}$	$\leq 5000 \text{ pF}$	$\leq 5000 \text{ pF}$

THERMAL CHUCKS CONTINUED

Note: Results measured with thermal chuck at standard probing height (10,000 µm) with chuck in a dry environment. Moisture in the chuck may degrade performance.

System Electrical Performance (w/ thermal chuck)

		ELITE300/AP FEMTOGUARD	ELITE300/M FEMTOGUARD	ELITE300/M COAXIAL
Probe leakage*	Thermal Controller OFF	≤ 1 fA	≤ 1 fA	≤ 1 fA
	Thermal Controller ON	≤ 5 fA	≤ 10 fA	≤ 10 fA
Chuck leakage* (ERS)	Thermal Controller OFF	≤ 3 fA	≤ 15 fA	25 pA
	-60 °C	≤ 6 fA	≤ 20 fA	25 pA
	25 °C	≤ 3 fA	≤ 20 fA	25 pA
	200 °C	≤ 3 fA	≤ 20 fA	25 pA
	300 °C	≤ 6 fA	≤ 25 fA	220 pA
Residual capacitance		≤ 2.5 pF	≤ 75 pF	n/a
Capacitance variation**		≤ 2 fF	≤ 75 fF	≤ 75 fF
Settling time***	All temperatures @ 10 V	≤ 50 fA @ 0.5 sec	≤ 100 fA @ 2 sec	n/a

* Overall leakage current is comprised of two separate components: 1) offset, and 2) noise. Offset is the DC value of current due to instrument voltage offset driving through isolation resistance. Noise is low-frequency ripple superimposed on top of offset and is due to disturbances in the probe-station environment

Noise and leakage are measured with a 4156c NOISE.dat CMI program or equivalent; 4 ms sample rate, auto scale, 1 nA compliance, 1 NPLC integration

** This is chuck capacitance variation based upon chuck position anywhere in the 300 mm area, as measured by a stationary DC probe. Test conditions: Agilent 4284A LCR meter (Cp-d, 1 Mhz, 4 Ave, 0 Power), DCP-150, 75 µm above chuck surface, 4-wire connection (HiZ/Hipot to chuck, Loz/Lopot to Probe), 25° C.

*** Settling time is measured with a 4156c SETLB.dat CMI program or equivalent; 2 ms sampling rate, limited auto 1 nA, 1 µA compliance, 3 NPLC integration.

THERMAL SYSTEM PERFORMANCE

Thermal System Options

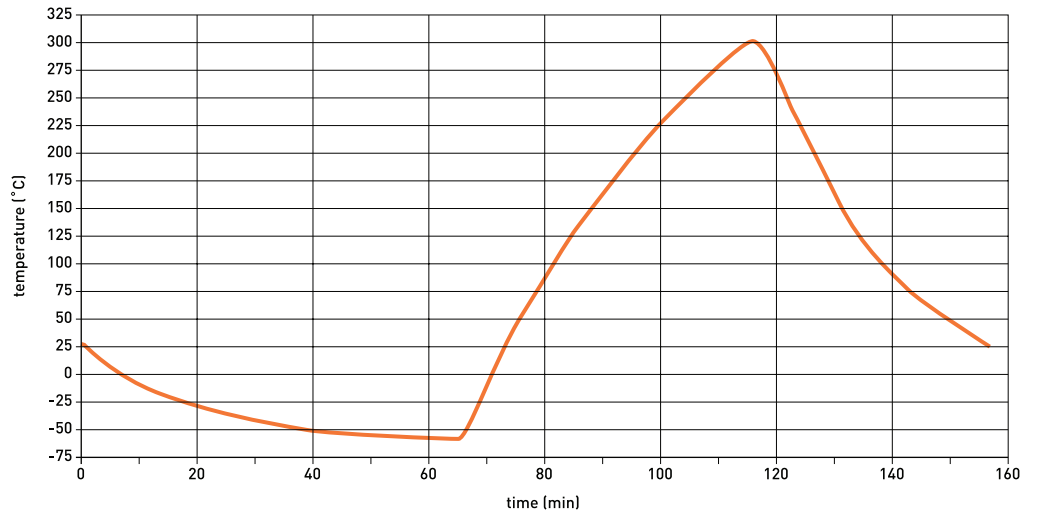
Temperature ranges & suppliers	-60 ° to 300 °C, ERS (200/230 VAC 50/60 Hz)
	+20 ° to 300 °C, air-cooled ERS (100-230 VAC 50/60 Hz)
	+30 ° to 300 °C, air-cooled ERS (100-230 VAC 50/60 Hz)

ERS Air Cool Plus Thermal System Specifications (-60° to 300° C)

Temperature range	-60 ° to 300 °C
Accuracy	±0.1 °C (with calibrated controller)
Resolution	0.1 °C
Thermal uniformity	≤ 0.5 °C @ 25 °C, ≤ 2.0 °C @ -60 °C, ≤ 3.0 °C @ 300 °C
Transition time – Heating	-60 ° to 25 °C = 7 min, 25 ° to 300 °C = 42 min (Typical)
Transition time – Cooling	300 ° to 25 °C = 39 min, 25 ° to -60 °C = 58 min (Typical)
Thermal chuck flatness	≤ 30 µm @ -60 ° to 300 °C
Supply voltage	200/230 VAC 50/60 Hz
Supply air	480 liters/min (17 SCFM), -45 °C dew point
Power consumption	Controller: 950 VA, Chiller: 2300 VA
Audible noise	< 58 dB [C]
Dimensions – Controller	483 mm (W) x 455 mm (D) x 144 mm (H) (19.0 in. x 17.9 in. x 5.7 in.) (19 in. rack mount)
Dimensions – Chiller	422 mm (W) x 500 mm (D) x 1030 mm (H) (16.6 in. x 19.7 in. x 40.6 in.)
Weight	Controller: 24 kg (53 lb.), Chiller: 80 kg (176 lb.)

ERS Air Cool Plus Thermal Transition Time (-60° to 300° C)

Typical times using Elite300/AP with FemtoGuard Chuck; 10-15% faster with coaxial chuck.

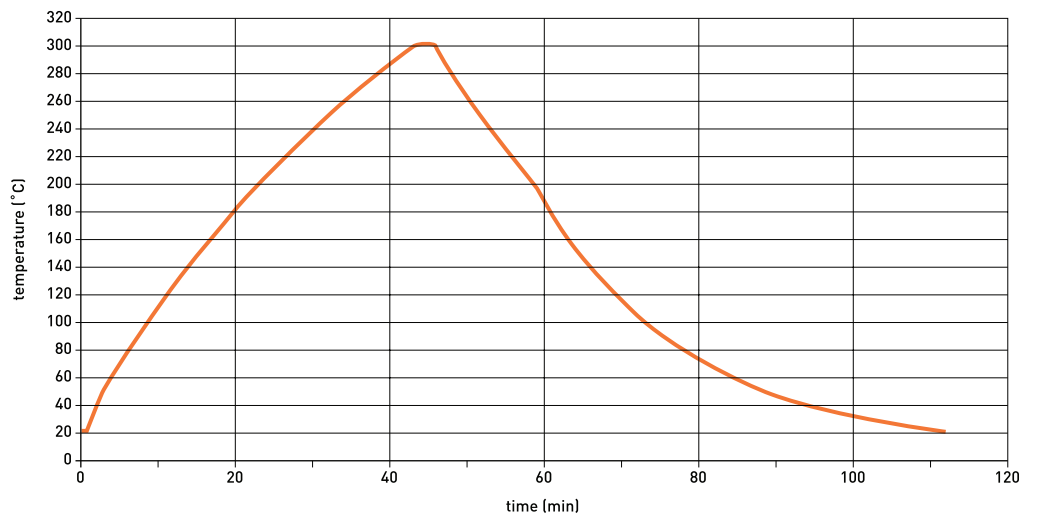


ERS Air Cool Thermal System Specifications (-20° to 300° C)

Temperature range	+20° to 300° C
Accuracy	±0.1° C (with calibrated controller)
Resolution	0.1° C
Thermal uniformity	≤ 0.5° C @ 30° C, ≤ 3.0° C @ 300° C
Transition time – Heating	20° to 300° C = 43 min [Typical]
Transition time – Cooling	300° to 20° C = 59 min [Typical]
Thermal chuck flatness	≤ 30 μm @ +20° to 300° C
Supply voltage	100/230 VAC 50/60 Hz
Supply air	350 liters/min (12 SCFM)
Power consumption	2015 VA
Audible noise	< 58 dB [C]
Dimensions	553 mm (W) x 600 mm (D) x 685 mm (H) [21.8 in. x 23.6 in. x 27.0 in.]
Weight	24 kg [53 lb.]

ERS Air Cool Thermal Transition Time (-20° to 300° C)

Typical times using Elite300/M with FemtoGuard Chuck; 10-15% faster with coaxial chuck.



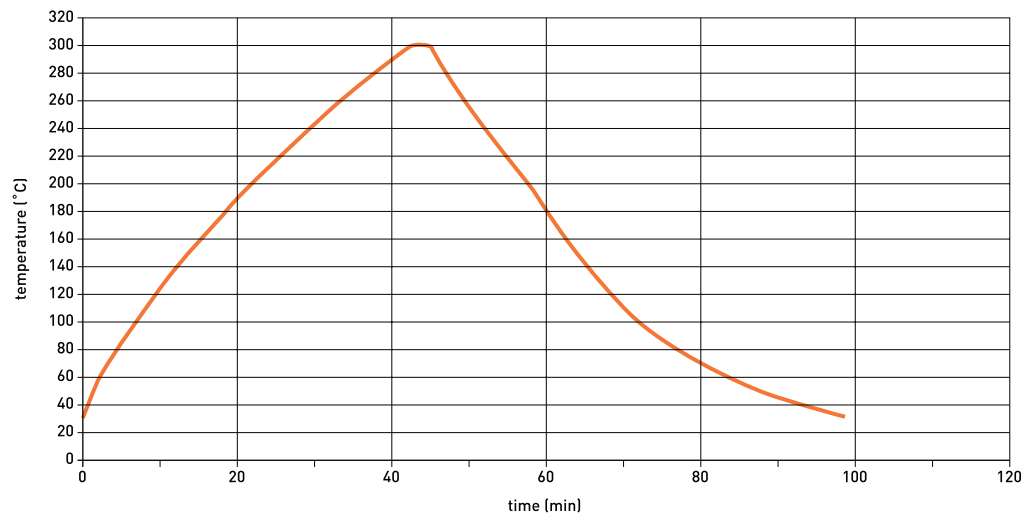
THERMAL SYSTEM PERFORMANCE CONTINUED

ERS Air Cool Thermal System Specifications (+30° to 300°C)

Temperature range	+30° to 300° C
Accuracy	±0.1° C (with calibrated controller)
Resolution	0.1° C
Thermal uniformity	≤ 0.5° C @ 30° C, ≤ 3.0° C @ 300° C
Transition time – Heating	30° to 300° C = 44 min (Typical)
Transition time – Cooling	300° to 30° C = 55 min (Typical)
Thermal chuck flatness	≤ 30 μm @ +30° to 300° C
Supply voltage	100/230 VAC 50/60 Hz
Supply air	350 liters/min (12 SCFM)
Power consumption	2015 VA
Audible noise	< 58 dB (C)
Dimensions	553 mm (W) x 600 mm (D) x 685 mm (H) (21.8 in. x 23.6 in. x 27.0 in.)
Weight	24 kg (53 lb.)

ERS Air Cool Thermal Transition Time (+30° to 300°C)

Typical times using Elite300/M with FemtoGuard Chuck; 10-15% faster with coaxial chuck.



MICROSCOPE BRIDGE MOUNT/TRANSPORTS

Programmable Bridge/Transport Specifications

Travel	75 mm (X) x 75 mm (Y) x 150 mm (Z) (3.0 in. x 3.0 in. x 6.0 in.)
Travel in Top Hat	13 mm x 13 mm (0.5 in. x 0.5 in.)
Z Lift	150 mm (6.0 in.)
Resolution X-Y axis	0.4 μm (.02 mils)
Resolution Z axis	0.08 μm (0.003 mils)
Repeatability X-Y axis	≤ 2 μm (0.08 mils)
Repeatability Z axis	≤ 1 μm
Accuracy X-Y axis	≤ 5 μm (0.20 mils)
Accuracy Z axis	≤ 4 μm
Speed	5 mm/sec (0.2 in./sec)

Motorized Bridge/Transport Specifications

Travel	75 mm (X) x 75 mm (Y) x 150 mm (Z) (3.0 in. x 3.0 in. x 6.0 in.)
Travel in Top Hat	13 mm x 13 mm (0.5 in. x 0.5 in.)
Z Lift	150 mm (6.0 in.)
Resolution X-Y axis	0.4 μ m (.02 mils)
Resolution Z axis	0.08 μ m (0.003 mils)
Repeatability Z axis	\leq 1 μ m
Speed	5 mm/sec (0.2 in./sec)

Manual Bridge/Transport Specifications

Travel	50 mm (X) x 50 mm (Y) x 50 mm (Z) (2.0 in. x 2.0 in. x 2.0 in.)
Travel in Top Hat	13 mm x 13 mm (0.5 in. x 0.5 in.)
Z Lift	150 mm (6.0 in.)

AUX CHUCK

Quantity	Two positions, mounted independent of the thermal chuck
Max substrate size	15.2 mm x 22.1 mm (0.6 in. x 0.87 in.) ISS substrate 19 mm x 19 mm (0.75 in. x 0.75 in.) Square substrate
Material	Magnetically loaded, RF absorbing Eccosorb®
Thermal isolation	air gap, > 10 mm
Flatness	\leq 10 μ m (.39 mils)
Positional repeatability	\leq 2 μ m (.08 mils) after rollout event
Vacuum actuation	Independent software control

PREMIUM CONTROL KIT

Contents	Premium Control Kit is standard for the Elite300/AP model and available as an option for Elite300/M model. It can be selected as an upgrade option at time of order or may be purchased later and upgraded in the field. Includes Quick Access LCD screen and 4-button controls, plus Manual Override rotary controls for Stage X-Y axis
Quick-access control screen	Provides quick access for several common functions: <ol style="list-style-type: none"> 1. Wafer load/unload – lower chuck and move to/from center of travel from/to front wafer-load position 2. Vacuum on/off – toggle wafer vacuum on and off 3. Manual mode – enables fly-by-wire controls for X- and Y-axis 4. AUX 1 – user-selectable option
Manual X-Y override controls	Rotary knobs on front of station to manually position wafer stage X- and Y-axis (fly-by-wire technology) Includes safety features for protecting wafer/probe needle damage

STATION CONTROLLER

E3-CTL1	Standard system controller with Intel processor
E3-CTL2	Optional system controller with AMD processor

FACILITY REQUIREMENTS

Note: These are for the Elite300 probe station only. Thermal system not included. See the Stations Facility Guide for complete information.

Vacuum	400 mm (15 in.) of Hg min
Dry-air purge	2.8 liters/sec (6 SCFM)
Compressed air	0.5 liters/sec (1 SCFM) @ 6 bar (85 psi) min
Background vibrations	"Operating Theatre" level (as specified by ISO)
Power	100-120 V @ 2.5 A (50-60 Hz), 200-240 V @ 1 A (50-60 Hz)



ORDERING INFORMATION

AVAILABLE MODELS

Elite300/AP – Probe Station Platform, Semi-automatic with MicroChamber, AttoGuard, PureLine II Technology

CONFIGURATION INCLUDES

Elite300, microscope bridge/transport – programmable 75 mm (3"x3") (E3-ST75P)

Elite300, Premium Control Kit (LCD, Manual XY Controls) (E3-PCK)

Elite300, AUX chuck kit (E3-AUX)

Elite300, computer accessory mount kit, 20" LCD monitor and ergo arm

Elite300, Intel controller (E3-CTL1)

Elite300, height kit – Standard (E3-SHK)

Elite300/M – Probe Station Platform, Semi-automatic with MicroChamber

CONFIGURATION INCLUDES

Elite300, microscope bridge/transport – motorized 75 mm (3"x3") (E3-ST75)

Elite300, computer accessory mount kit, 20" LCD monitor and ergo arm

Elite300, Intel controller (E3-CTL1)

Elite300, height kit – Standard (E3-SHK)

AVAILABLE MODELS CONTINUED

Note: To complete the Elite300 Station Platform configuration:

1. Select a modular chuck from the following list (X=1 for Nickel-plated chuck and 2 for Gold-plated)
2. Select additional Elite300 options from the following list (see compatibility chart below)

Elite300 Options

PART #	GENERAL DESCRIPTION	OPTION COMPATIBILITY	
		AP	M
E3-ST75P	Elite300, microscope bridge/transport – programmable 75 mm (3"x3")	Std	●
E3-ST75	Elite300, microscope bridge/transport – motorized 75 mm (3"x3")		Std
E3-AUX	Elite300, AUX chuck kit	Std	●
E3-PCK	Elite300, Premium Control Kit (LCD, Manual X-Y Controls)	Std	●
E3-CTL1	Elite300, system controller, Intel	Std	Std
E3-CTL2	Elite300, system controller, AMD	●	●
E3-SHK	Elite300, height kit – Standard	Std	Std
E3-LHK	Elite300, height kit – Low profile	●	●

Elite300 Non-Thermal Chucks

PART #	GENERAL DESCRIPTION	CHUCK COMPATIBILITY	
		AP	M
TC-001-30x	FemtoGuard triaxial chuck, non-thermal, 300 mm (12")	●	
TC-001-10x	Coaxial chuck, non-thermal, 300 mm (12")		●

Elite300 Non-Thermal Chucks

PART #	GENERAL DESCRIPTION	CHUCK COMPATIBILITY	
		AP	M
TC-211-30x	FemtoGuard triaxial chuck, thermal, -60° to 300° C (air-cooled ERS), 300 mm (12")	●	●
TC-211-10x	Coaxial chuck, thermal, -60° to 300° C (air-cooled ERS), 300 mm (12")		●

Note: X = 1 (Nickel), X = 2 (Gold)

Elite300 Thermal Systems

PART #	GENERAL DESCRIPTION	THERMAL COMPATIBILITY	
		TC-211-XXX	TC-311-XXX
TS-211-14P	Thermal system for Elite300, -60° to 300° C, air-cooled ERS (200/230 VAC 50/60 Hz)	●	
TS-211-05T	Thermal system for Elite300, +20° to 300° C, air-cooled ERS (100/230 VAC 50/60 Hz)	●	
TS-211-02T	Thermal system for Elite300, +30° to 300° C, air-cooled ERS (100/230 VAC 50/60 Hz)	●	

Note: Thermal systems must match the thermal chuck selected, i.e. TS-211-xxx thermal systems are compatible with TC-211-xxx chucks.

		REGULATORY
Certification	NRTL, CE, Semi S2	

		WARRANTY
Warranty*	Fifteen months from date of delivery or twelve months from date of installation	
Service contracts	Single and multi-year programs available to suit your needs	

*See Cascade Microtech's Terms and Conditions of Sale for more details.

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

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www.cascademicrotech.com

