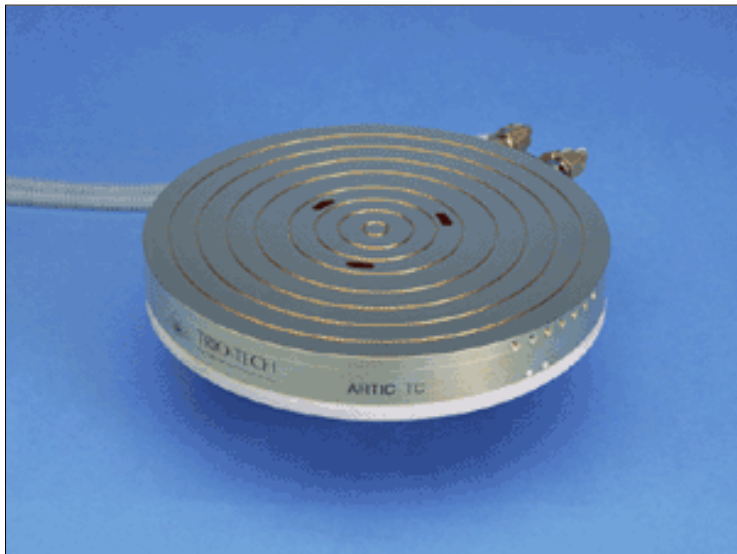




TRIO-TECH
INTERNATIONAL

Artic Temperature Chucks

Artic TC3800 Temperature Controlled Chucks



- UNIQUE HEATER/CHILLER DESIGN
- HIGH PROBE FORCE CAPABILITY
- HIGH POWER DEVICE TESTING
- WIDE TEMPERATURE RANGES
- HIGH ISOLATION AND TRIAXIAL OPTIONS AVAILABLE
- LOW HEIGHT AND WEIGHT

DESCRIPTION

The new Artic TC3800 has been developed to meet the demanding requirements of 200 mm wafer production probing applications. The unique design, for which patents are pending, offers exceptional mechanical strength for high probing forces while providing the convenience of a temperature controlled chuck with excellent temperature performance. The Artic TC3800 is ideally suited for continuous high temperature testing and high power applications.

Unique heater/chiller design: The design and construction of the Artic TC3800 is the result of extensive research and development by Trio-Tech. The design combines the latest heater and materials technologies to provide a temperature controlled chuck with low height and weight yet with exceptional mechanical strength. The chuck is designed for high wafer probing forces and for testing high power devices. The unique design offers low thermal resistance and good power dissipation which are essential for high power test applications.

FEATURES

Model	Temperature Range	Chiller	High Isolation Option	Triaxial Option	High Probe Force	High Power Testing
TC3800-1	0°C to +200°C	RCL800	YES	YES	YES	YES
TC3800-2	0°C to +300°C	RCL800	YES	YES	YES	YES
TC3800-3	-60°C to +200°C	RCL2000	YES	YES	YES	YES
TC3800-4	-60°C to +300°C	RCL2000	YES	YES	YES	YES

SPECIFICATIONS:

PARAMETER	TC3800-1/2	TC3800-3/4
Temperature Range	0°C to +200/300°C	-60°C to +200/300°C
Temperature Accuracy	±0.5°C	±0.5°C
Temperature Uniformity	±1.0°C or ±1.0% of set value	±1.0°C or ±1.0% of set value
Temperature Stability	±0.1°C	±0.1°C
Ramp Rates 0°C to +25°C / +25°C to 0°C +25°C to +200°C / +200°C to +25°C +25°C to +300°C / +300°C to +25°C -60°C to +25°C / +25°C to -60°C	5 min / 6 min 10 min / 20 min 20 min / 30 min N/A	5 min / 6 min 10 min / 15 min 20 min / 25 min 10min / 20min
Chuck Top Flatness	≤ 25 µm	≤ 25 µm
Chuck Top Stiffness (deflection with 55 Kg load at 90mm from the chuck center on 20 x 20 mm area)	≤ 10 µm	≤ 10 µm
Isolation Chuck Top to Ground - (Coaxial) Chuck Top to Ground - (High Isolation) Chuck Top to Ground - (Triaxial) Chuck Top to Guard - (Triaxial)	≥ 1GΩ ≥ 1TΩ ≥ 1TΩ ≥ 1TΩ	≥ 1GΩ ≥ 1TΩ ≥ 1TΩ ≥ 1TΩ
Capacitance Chuck Top to Ground - (Coaxial) Chuck Top to Ground - (High Isolation) Chuck Top to Ground - (Triaxial) Chuck Top to Guard - (Triaxial)	≤ 1400pF ≤ 500pF ≤ 300pF ≤ 500pF	≤ 1400pF ≤ 500pF ≤ 300pF ≤ 500pF
Leakage current with Triaxial Guarding @ 30°C	≤ 50fA	≤ 50fA
Chuck Diameter	8 in. / 205 mm	8 in. / 205 mm
Height (typical) (Coaxial) (Triaxial)	0.8 in. / 21 mm 1.1 in. / 28 mm	0.8 in. / 21 mm 1.1 in. / 28 mm
Weight (typical) (Coaxial) (Triaxial)	4 lbs. / 1.8 Kg 5.8 lbs / 26 Kg	4 lbs. / 1.8 Kg 5.8 lbs / 26 Kg

* Specifications may change without notice