



RHK Technology
Imaging the Future of Nanoscience

Ambient STM/AFM



ATM 300 STM
ATM 350 AFM/STM

True STM Environment that is Completely UHV Compatible

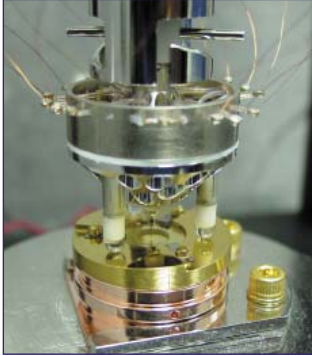
RHK's ATM 300 STM and 350 AFM/STM provide a very unique instrument solution for researchers. The ATM series offers users a true state-of-the-art SPM instrument that is completely UHV compatible. No other instrument provides this level of functionality with unlimited upgradeability.

✿ Features:

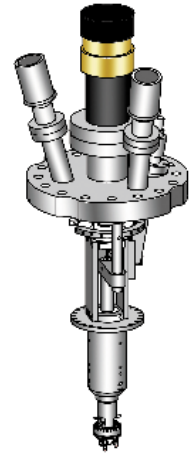
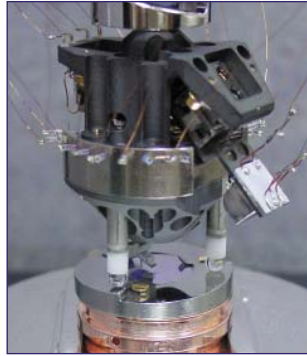
- UHV 300 "Beetle" Scanner Design - Unmatched thermal stability. Scan the same area of a sample repeatedly without drifting
- SPM 1000 Controller - The world's standard in control flexibility and performance
- Environmental control enclosure
- Open Design - Optical access to tip/sample interface
- UHV materials and construction
- Custom Interface Packages available - e.g. Glove Box
- Optional – Fluid cell – (For use with ATM 300)

Specifications

ATM 300

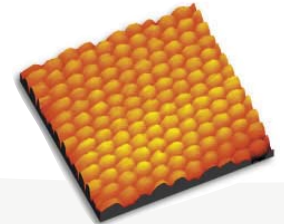


ATM 350

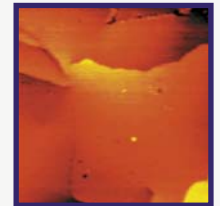


RHK's Standard UHV scanner flange assembly

	ATM 300	ATM 350
Resolution		
Resolution (X,Y)	0.5Å	0.5Å
Resolution (Z)	0.05Å	0.1Å
Range		
Scan Range (X, Y)	5µm, 2.5µm or 1.5µm* or 8µm, 4.1µm, or 2.5µm** scan tube options	5µm* or 8µm**
Offset Range (X,Y)	Up to 5µm, 2.5µm, 1.5µm* or up to 8µm, 4.1µm, 2.5µm** Summed with Scan	Up to 5µm* or 8µm** - Summed with Scan
Z Range	0.65µm, 0.43µm, 0.32µm respectively w/ above options* or 1.08µm, 0.71µm, 0.53µm respectively w/ above options**	.73µm or 1.2µm*
Offset Range (Z)	0.73µm, independent of Z signal* or 1.2µm, independent of Z signal**	Up to 0.73µm* or 1.2µm**, summed with Z signal
	* with SPM1000 +/- 130V ** with SPM1000HV +/- 215V output range	
Coarse Positioning		
Inertial X-Y Translation	~6.4mm (1/4")	~6.4mm (1/4")
Inertial X-Y Step Size	~ 200Å/step - 2000Å/step	~ 200Å/step - 2000Å/step
Inertial Z Translation	0.5mm	0.5mm
Inertial Z Step Size	~4Å/step - 40Å/step	~4Å/step - 40Å/step
Sample		
Sample Size	16mm dia. (5/8") - Ambient Sample Holder	10mm dia.
Image Area	6mm (1/4") Diameter	~5mm dia.
Scanner		
Type	"Johnny Walker" version of the Beetle™	"Johnny Walker" version of the Beetle™
Resonant Frequency	Structure > 5kHz	Structure > 1.7kHz
Thermal Drift (X, Y, and Z)	<1Å/min.	<1Å/min.
Other		
Tunneling Current	<1 pA (with IVP-300) to 100nA (with IVP-200)	<10 pA (with IVP-300) to 100nA (with IVP-200)
Bias Voltage	±1V or ±10V with 10 turn potentiometer resolution	±1V or ±10V with 10 turn potentiometer resolution



Atomic Resolution on Au(111) in Air (STM)



FAST Ultra-low current imaging **118 fA**



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The SPM Standard in Flexibility and Performance