

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

SPECTRA-TECH

Foundation Series™

The most versatile sampling accessory system available



Introducing the Foundation Series™ of FT-IR sampling technologies; a concept so simple you may wonder why it has not been invented before.

The Foundation Series™ utilizes a single common base module, "the Foundation" which mounts in your spectrometers sampling compartment. Each of the accessory Swap-Top™ modules drop into the Foundation for rapid change of analytical technique to a method which matches the precise needs of your application.

The Foundation Series™ combines the flexibility of multiple sampling technologies with high performance optical design to minimize analysis time and maximize your labs sample throughput. The Foundation Series design also utilizes an integrated purge to eliminate CO_2 and water vapor interferences.

Currently there are four (4) Swap-Top™ modules to choose from with more choices planned for the future. The modules currently available include: Thunderdome™, SpeculATR™, Multi-Reflection HATR™ and CPC Diffuse™. All of the modules incorporate an alignment free design allowing the user to install multiple Foundation modules in different FT-IR spectrometers (even different brand spectrometers) without the need to perform tedious alignment procedures. This cross platform compatibility also reduces your need to buy redundant accessories for different manufacturer spectrometers providing exceptional value for your lab equipment budget.

Who is the system for?
* For labs that are constantly switching accessories
* High-throughput, rapid response lab environments
* For labs with multiple FT-IR platforms

Features

Swap-Top™ accessory modules which mount in a common base (The Foundation)
No alignment
Quick purge
Low cost Swap-Top™ upgrades
Cross platform compatibility of modules

Applications

Strongly absorbing samples (Thunderdome, SpeculATR)
Biological fluids (SpeculATR, Multi-Reflection ATR)
Aqueous samples (Thunderdome, SpeculATR, Multi-Reflection ATR)
Polymer films (Thunderdome)
Coatings on reflective substrates (SpeculATR)
Adhesive samples (Thunderdome)
Organic Samples (Multi-Reflection ATR)
Powders (CPC Diffuse)



Foundation Series Thunderdome™ with the Lightning Viewer™



Foundation Series Thunderdome™ with tilting pressure tower



Foundation Series CPC Diffuse

Thunderdome™ Swap-Top™ Module

Rugged ATR accessory with a Germanium crystal. The Thunderdome has been available since 1997 as a stand-alone accessory. It is now available as a Foundation Series module, further increasing it's utility. The Thunderdome is the largest selling single reflection ATR accessory on the market today. It is easy to see why. The Thunderdome gives you rugged performance comparable to faceted diamond accessories, for thousands of dollars less. Germanium has a high refractive index and therefore a shallow depth of penetration making it ideal for analysis of very strong absorbers. Germanium has excellent chemical resistivity, attacked only by Aqua Regia and hot sulfuric acid. Finally, the Thunderdome features a domed sampling surface to focus the infrared beam and fail-safe pressure device to obtain a good spectrum on the first try, an unprecedented feature in ATR.

Standard Features

Single bounce ATR Germanium crystal
High throughput >40%
Tilting Pressure devices for easy cleaning
Reproducible pressure applied to the sample
High refractive index crystal
Collects infrared data on almost any sample

Applications

- Single polymer beads
- Formed, rigid polymers
- Paint chips
- O-rings
- Paper/contaminants
- Glass Composites
- Liquids, including aqueous solutions, corrosives and caustics

Options

Lightning Viewer™ with 8.5X magnification for accurate positioning of minute samples.

CPC Diffuse™ Swap-Top™ Module

Diffuse Reflection with CPC technology. Diffuse Reflection is one of the most popular sampling techniques used today. The CPC Diffuse design makes analysis easy and reliable. A novel optical element called a compound parabolic concentrator (CPC) both directs energy to your sample and collects the reflected energy. It is insensitive to sample height and sample morphology making it possible to obtain great results from samples that would foil older designs. The CPC Design also minimizes unwanted specular bands from the final sample spectra.

Features

Downward looking CPC design
Less sensitive to particle morphology
Minimizes specular contamination
Easy to use sample slide

Applications

- Powders
- Organics
- Intractable solids



Foundation Series SpeculATR

SpeculATR™ Swap Top Module

Single Reflection ATR combined with Specular Reflectance. This module provides routine single reflection ATR spectroscopy for liquids or solids, and also 45° specular reflectance measurements. The Swap-Top™ module has the dual-technique flexibility, offering single reflection HATR and Specular Reflectance in one accessory. The base unit includes (2) Zinc Selenide (ZnSe) crystal assemblies, one for liquids, and one for solids. Replacement crystals cost less than one third the cost of a traditional ATR prism. Energy throughput is excellent, depending on the crystal material, ranging up to 50% throughput. Other crystal materials are available, including Silicon (Si) and Germanium (Ge).

Features

Dual purpose accessory
Single bounce ATR 45 degree incidence
Pinned in place Fresnel ATR crystal
Low replacement crystal cost
ZnSe, Ge and Si crystals
45 degree Specular Reflectance
7 and 13mm masks

Applications

- Biological fluids
- Analysis of neat solvents
- Aqueous samples
- Quality control analysis
- Strong infrared absorbers



Foundation Series Multi-Bounce ATR

Multi-Reflection HATR™ Swap-Top™ Module

Multi-Reflection Horizontal ATR. In 1986, Spectra-Tech patented the crystal design used in this accessory. You can choose from a variety of crystals depending on your application. The base module includes (1) 45° Zinc Selenide (ZnSe) crystal in either a flat configuration for solids, or a trough configuration for liquids. A combo unit with (2) crystals flat and trough is also available. Other crystal materials are available, including Silicon (Si) and Germanium (Ge).

Features

Multi-Reflection Flat and Trough crystal options
ZnSe, Ge and Si crystals (all 45 degree incidence)
No alignment needed

Applications

- Liquids
- Solids
- Pastes
- Soft, compressible powders

Ordering Information

Part Number*	Product Description
0071-2XX	FOUNDATION SERIES™ with SpeculATR Swap-Top Module
0071-200	SpeculATR Swap-Top Module
0072-2XX	FOUNDATION SERIES™ with Multi-Reflection ATR Swap-Top Module (Combination Kit)
0072-200	Multi-Reflection ATR Swap-Top Module (Combination Kit)
0072-3XX	FOUNDATION SERIES™ with Multi-Reflection ATR Swap-Top Module (Flat Plate Kit)
0072-300	Multi-Reflection ATR Swap-Top Module (Flat Plate Kit)
0072-3XXT	FOUNDATION SERIES™ with Multi-Reflection ATR Swap-Top Module (Trough Plate Kit)
0072-300T	Multi-Reflection ATR Swap-Top Module (Trough Plate Kit)
0073-4XX	FOUNDATION SERIES™ with CPC Diffuse Swap-Top Module
0073-400	DRIFTS Swap-Top Module
0074-1XX	FOUNDATION SERIES™ with Thunderdome Module (includes Tiltable Pressure Tower)
0074-100	Thunderdome Swap-Top Module with Tiltable Pressure Tower
0074-2XX	FOUNDATION SERIES™ with Thunderdome Module (includes Lightning Viewer Pressure Tower)
0074-200	Thunderdome Swap-Top Module with Lightning Viewer Pressure Tower

Replacement Parts

Part Number	Product Name
0071-603	SpeculATR ZnSe trough crystal (liquids)
0071-703	SpeculATR ZnSe flat crystal (solids)
0071-613	SpeculATR Silicon trough crystal (liquids)
0071-713	SpeculATR Silicon flat crystal (solids)
0071-653	SpeculATR Germanium trough crystal (liquids)
0071-753	SpeculATR Germanium flat crystal (solids)
0071-050	SpeculATR 7mm Mask
0071-051	SpeculATR 13mm Mask
0072-603	Multi-Reflection ATR ZnSe trough crystal plate (liquids)
0072-703	Multi-Reflection ATR ZnSe flat crystal plate (solids)
0072-613	Multi-Reflection ATR Ge trough crystal plate (liquids)
0072-713	Multi-Reflection ATR Ge flat crystal plate (solids)
0072-653	Multi-Reflection ATR Si trough crystal plate (liquids)
0072-753	Multi-Reflection ATR Si flat crystal plate (solids)
0070-1XX	Foundation Series Base Module Only
0073-050	CPC Diffuse Sample Slide (two sample locations)
0073-051	CPC Diffuse Reference Slide (w/gold mirror)
0074-150	Replacement Tiltable Tower for Thunderdome
0074-250	Replacement Lightning Viewer for Thunderdome

* (“XX” denotes instrument code)

4/00

SPECTRA-TECH

A subsidiary of Thermo Optek Corporation,
a Thermo Electron Company

website: www.spectra-tech.com
e-mail: info@spectra-tech.com

In USA
Spectra-Tech, Inc.
2 Research Drive
P.O. Box 869
Shelton, CT. 06484-0869
Phone: 203-926-8998
800-843-3847
FAX: 203-926-8909

In Japan
ST Japan
1-14-10 Kakigara-cho
Nihonbashi, Chuo-ku
Tokyo, 103 Japan
Tel: (033) (666) 2561
FAX: (033) (666) 2658

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP