

## MICROSAMPLING

For samples considerably smaller than a typical 8–10 mm IR beam, microsampling accessories and microhandling tools make ideal additions to your FTIR spectrometer. Our microsampling accessories demagnify the FTIR beam to a smaller dimension, thereby increasing IR throughput for small samples.

**μMAX™ FTIR Microscope**  
*Transmission, reflection and ATR analysis  
of micro samples*

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**Microsampling Tools**  
*Sample handling tools for microanalysis*

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**Micro Diamond Cell**  
*Compressing and holding samples  
for microanalysis*

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**S-100R Heated Microscope Stage**  
*Temperature measurements under vacuum  
or controlled gas flow*

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**4X and 6X Beam Condensers**  
*Transmission measurements of micro samples*

## $\mu$ MAX – Sample Compartment Microscope for FTIR



### FEATURES

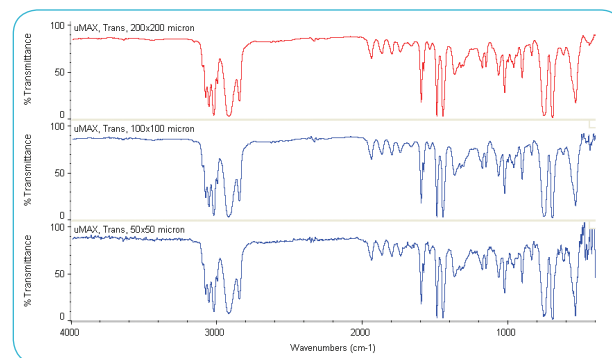
- Compact sample compartment design to save lab space
- Uses FTIR detectors – DTGS or MCT
- Available in transmission, reflection and ATR modes
- High throughput optical design
- Simultaneously view and collect spectrum
- Easy-to-use, robust design
- Available for most FTIR spectrometers
- Trinocular with USB camera option
- Low-cost

The  $\mu$ MAX™ is an optical design for IR microanalysis providing high-performance sampling at low-cost with exceptional ease-of-use. The  $\mu$ MAX fits into the sample compartment of most FTIR spectrometers. The compact, planar optical layout minimizes the pathlength of the IR beam and thereby maximizes IR throughput.

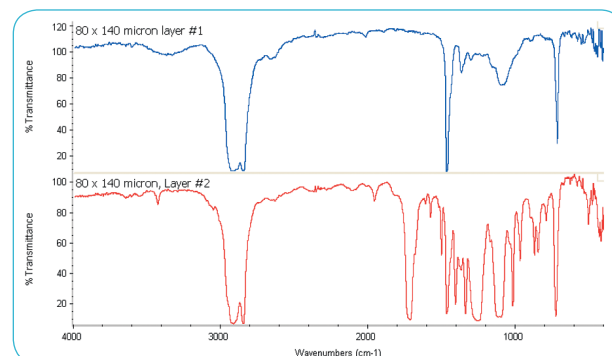
All operations with the  $\mu$ MAX are intuitive and made even easier with standard **Dichroic Optics** which provides full viewing of the sample while collecting IR spectra. With Dichroic Optics you can view the sample area and simultaneously search for appropriate IR spectral content – greatly speeding microanalysis. The fully variable X, Y,  $\theta$  see-through aperture for transmission provides optimized sample dimensioning – for getting the maximum IR signal from every sample.

The  $\mu$ MAX IR microscope uses a 7.45X **Schwartzschild objective and condenser** to focus the IR beam onto the sample and provide excellent sample visualization – better than 1-micron visible image resolution. An optional CCD camera enables video image projection onto the PC. With the Dichroic Optics of the  $\mu$ MAX and spectral preview of the FTIR software one can view changing IR spectra and sample position in real-time on the PC.

The  $\mu$ MAX is the first sample compartment IR microscope accessory capable of all **microsampling modes – transmission, reflection and ATR**. The  $\mu$ MAX fits into the sample compartment, using the spectrometers detector for convenience and sampling flexibility. For relatively larger micro samples (100 microns and greater) the DTGS detector provides excellent performance with the  $\mu$ MAX and enables full mid-IR spectral range coverage to 450  $\text{cm}^{-1}$ . For smaller micro samples to 20 microns in size an MCT detector is recommended.

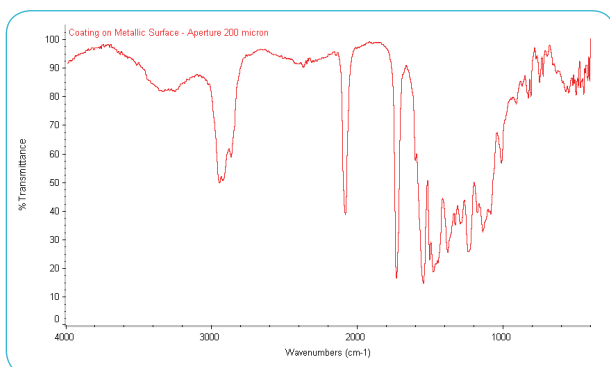


Transmission spectra of polystyrene film at aperture sizes of 200 x 200, 100 x 100, and 50 x 50 microns using the  $\mu$ MAX IR Microscope and the DTGS detector of the FTIR spectrometer (spectra were collected at 4  $\text{cm}^{-1}$  spectral resolution using a 2-minute collection time).



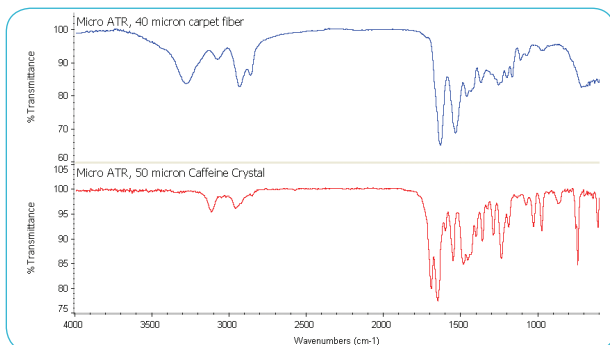
Transmission spectra of polymer laminate sample using DTGS detector. Samples held in PIKE Micro Compression Cell.

Switching from transmission to reflection on the  $\mu$ MAX is easy with a thumb wheel selection. Reflection sampling area is defined by use of the aperture slide with pre-defined sizes from 40 to 1000 microns. Micro reflection analysis of small areas of interest on reflective surfaces is made easy with the PIKE Technologies  $\mu$ MAX. Simply focus and position the sampling stage, select the sample area with the aperture slide and collect the spectrum. The background spectrum is collected using the same dimension aperture using the gold-surfaced reference slide.



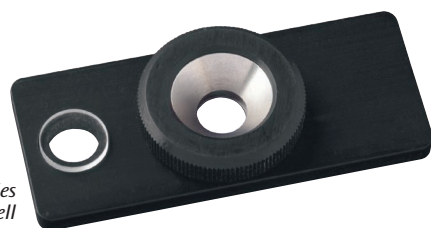
Micro reflection spectrum of a coating on a reflective base metal, 200 x 200 micron sampling area using DTGS detector.

ATR is an excellent sampling option for the  $\mu$ MAX IR microscope. The RotATR™ is a unique, pivot-designed germanium ATR providing easy and precise operation and excellent micro ATR spectra. Focus and select the sample area, rotate the ATR crystal into sample position, make sample contact and collect the IR spectrum.



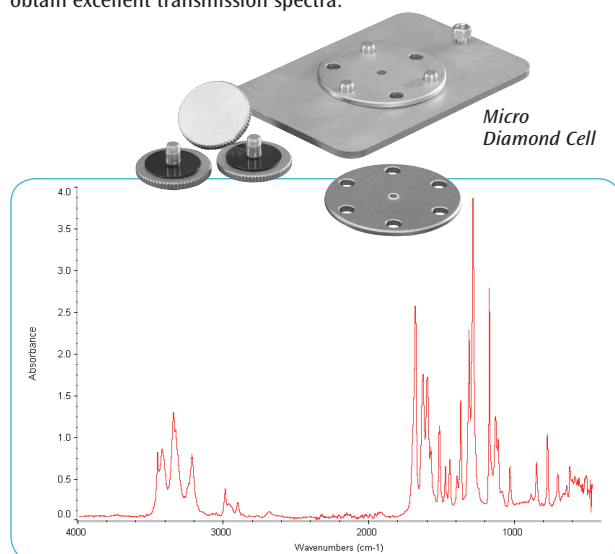
Micro ATR spectra of a 40 micron carpet fiber (upper – blue) and a 50-micron caffeine crystal (lower – red) using DTGS detector.

Micro ATR works exceptionally well with the  $\mu$ MAX IR microscope. The 100-micron flat-tipped micro ATR crystal makes intimate contact with the sample easily achieved, providing high spectral quality as seen in the data above.



PIKE Technologies  
Micro Compression Cell

The Micro Diamond Cell is an excellent option for use with the  $\mu$ MAX IR Microscope. Tiny chips or fiber segments can be flattened to obtain excellent transmission spectra.



Single drug crystal identified as benzocaine flattened in the Micro Diamond Cell. Data collected using DTGS detector.

## SPECIFICATIONS

<b>Sampling Modes</b>	Transmission, Reflection and ATR
<b>Objective</b>	7.45X Schwartzschild, N.A. 0.64, fixed for sturdy, permanent alignment
<b>Optional Condenser</b>	7.45X Schwartzschild, N.A. 0.64, Z-adjust to optimize sample focus
<b>Micro ATR</b>	RotATR with 100 micron tip, pivot pinned-in-place and easily removable for maximum sample area access. Universal Ge crystal for analysis of all micro samples.
<b>Sample Stage</b>	Z focus including X, Y slide sample holder, with 20 x 50 mm travel
<b>IR Collection/Sample Viewing</b>	Dichroic Optics reflect IR energy and transmit visible, providing continuous view of the sample during data collection. Dichroic Optics eliminate the need to switch optics from view sample to collect spectrum.
<b>Sample Masking</b>	X, Y, $\theta$ variable glass aperture for transmission sampling to view sample and surrounding sample area. Standard pinhole aperture slide for reflection sampling.
<b>Illumination</b>	Köhler, variable intensity, 50 watt
<b>Sample Viewing</b>	Binocular or Trinocular Viewer with 10X eye-pieces. Standard eyepiece reticule for sample dimensioning, optional video camera with USB interface.
<b>Visible Field of View</b>	1600 microns
<b>Visible Image Contrast</b>	Better than 1 micron
<b>Station</b>	In sample compartment, fits most FTIR spectrometers. Mounted on a baseplate for the FTIR spectrometer.
<b>Detector</b>	Uses standard detectors of the FTIR, typically DTGS and MCT
<b>Purge</b>	Includes purge tubes and purge inlet for additional purge. Compatible with sealed and desiccated FTIR spectrometers.
<b>Regulatory</b>	RoHS and CE Mark compliant

Please contact PIKE Technologies for additional product details.

## ORDERING INFORMATION

Bundled  $\mu$ MAX Packages

PART NUMBER	DESCRIPTION
034-21XX	Complete $\mu$ MAX Sample Compartment IR Microscope with transmission, reflection, Ge ATR and video camera
034-22XX	$\mu$ MAX Sample Compartment IR Microscope with transmission, reflection and Ge ATR
034-41XX	Complete $\mu$ MAX Sample Compartment IR Microscope for reflection, Ge ATR and video camera
034-42XX	$\mu$ MAX Sample Compartment IR Microscope with reflection and Ge ATR

Notes: Replace **XX** with your spectrometer's Instrument Code. [Click for List >](#)  
 All bundled  $\mu$ MAX packages include trinocular viewer, slide aperture for reflection, X, Y sample stage, microsampling kit, spectrometer base mount, purge tubes and storage case. Transmission versions include X, Y,  $\theta$  variable see-through aperture.

Configurable  $\mu$ MAX Systems $\mu$ MAX BASE OPTICS

PART NUMBER	DESCRIPTION
034-20XX	$\mu$ MAX Sample Compartment IR Microscope for transmission and reflection (ATR optional)
034-40XX	$\mu$ MAX Sample Compartment IR Microscope for reflection (ATR optional)

Notes: Replace **XX** with your spectrometer's Instrument Code. [Click for List >](#)  
 The  $\mu$ MAX Sample Compartment IR Microscope is available in versions for transmission and reflection sampling or reflection only – both versions are also compatible with ATR sampling. RotATR  $\mu$ MAX ATR must be purchased separately. Both versions include slide aperture for reflection, X, Y sample stage, microsampling kit, spectrometer base mount, purge tubes, and storage case. Transmission version includes X, Y,  $\theta$  variable see-through aperture.

SAMPLE VIEWING OPTIONS *(must select one or more)*

PART NUMBER	DESCRIPTION
034-3020	Binocular Viewer for $\mu$ MAX
034-3030	Trinocular Viewer for $\mu$ MAX
034-3010	Video Camera for $\mu$ MAX

Notes: Trinocular Viewer is required for selection of the Video Camera option. Binocular and Trinocular Viewers include adjustable reticule to assist with sample dimensioning.

MICRO ATR *(optional)*

PART NUMBER	DESCRIPTION
034-3040	RotATR, $\mu$ MAX ATR, Ge Crystal

Note: The RotATR micro ATR is compatible with the  $\mu$ MAX Sample Compartment IR Microscope.

## Sampling Options, Upgrades and Replacement Parts

## MICROSAMPLING OPTIONS

PART NUMBER	DESCRIPTION
034-3060	Micro Compression Cell for 13 mm IR transparent windows
160-1135	Window, KBr, 13 mm x 2 mm
162-0030	Micro Plane, carbide blade
162-0040	Micro Plane, diamond blade
162-0010	Micro Diamond Cell, 1.6 mm
162-0020	Micro Diamond Cell, 2.0 mm
162-0045	Micro TouchPick Pen Set <i>Includes pen with tip size 0.62mm, pen with tip size 0.17mm, scalpel/roller knife, cleaning compound and holder case</i>
162-0046	Diamond Window, 2.5 mm
162-0047	Diamond Window, 3.5 mm
162-0048	Micro Vice-Mini

Note: For additional product information, see the microsampling tools section.

 $\mu$ MAX IR MICROSCOPE UPGRADES

PART NUMBER	DESCRIPTION
034-0090	$\mu$ MAX IR Microscope Transmission Upgrade

Notes: Transmission Upgrade requires shipment of the accessory to PIKE Technologies. Upgrade includes  $\mu$ MAX condenser, X, Y,  $\theta$  variable see-through aperture, and all additional optics required for transmission, reflection and optional ATR sampling.

 $\mu$ MAX IR MICROSCOPE REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
300-0025	Gold-Surfaced Disk, 13 mm, for reflection analysis
034-3070	IR Microsampling Kit <i>Includes 3-position sample slide with gold mirror, 2 KBr windows, scissors, tweezers, probes and roller knife with replacement blades</i>
162-6401	3-position Sample Slide for 13-mm windows
300-0002	Gold-Surfaced Sample Slide
034-3080	Replacement Illumination Bulb for $\mu$ MAX

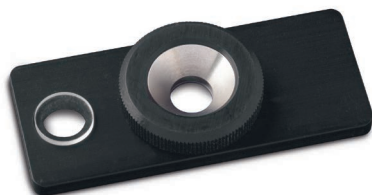
Note: For options not listed here, please contact PIKE Technologies.



# Microsampling Tools – Compression Cells and Sample Manipulation

## Micro Compression Cell

An excellent sampling tool for supporting small samples for transmission analysis with the PIKE  $\mu$ MAX IR microscope. Single crystals, flattened fibers, multi-layer polymer micro samples are firmly supported between salt windows – typically KBr for transmission analysis. The cell uses 13 x 2 mm windows and has a clear aperture of 10 mm. Compression of the sample is achieved by rotation of the knurled retainer.



## Diamond Window

Offers a durable, multi-use window for microscopic transmission measurements spanning from the UV to the far-IR regions. Two diamond sizes are available, 2.5 and 3.5 mm and are secured in a 13-mm diameter housing which may be used with the 3-Position Sample Slide (sold separately). The diamond is Type IIa.



## Micro Plane with either Carbide or Diamond Blade

A useful tool for preparation of thin slices of multi-layered samples for transmission microanalysis. The Micro Plane is available with either carbide or diamond blade. The carbide blade is recommended for general polymer materials. The diamond blade is recommended when the multi-layered sample has metallic content. The Micro Plane features an adjustable knife edge to control sample thickness.



## 3-Position Sample Slide

The PIKE 3-Position Sample Slide is designed for placement of 13-mm windows for transmission analysis or the 13-mm gold-surfaced disk for reflection analysis when using the  $\mu$ MAX IR Microscope. An open port of the 3-Position Sample Slide is used conveniently to support a flattened free-standing fiber for transmission analysis.



## Micro TouchPick Pen Set

Ideal for the delicate maneuvering of your specimens. The benefits are excellent control of sample handling, ease of handling fragile and statically charged samples, and no residue is left on the sample. The ergonomic pen set includes two pens with different sized adhesive tips (0.17 and 0.62 mm), special cleaner and a roller knife.



## Micro Vice-Mini

A multi-use sample holder fitting most microscope stages including IR, Raman and light microscopes. It makes holding round and unevenly-shaped samples easy. It may tilt the sample for correcting oblique sample orientation, and may be used to stretch fibers and polymer films.



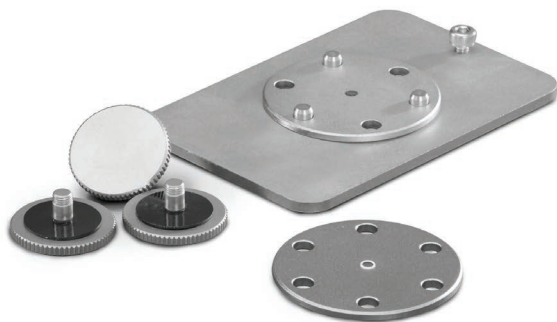
## ORDERING INFORMATION

### MICROSAMPLING TOOLS

PART NUMBER	DESCRIPTION
034-3060	Micro Compression Cell (requires selection of two 13 x 2 mm windows)
160-1135	Window, KBr, 13 x 2 mm (1 ea.)
160-1008	Windows, KBr, 13 x 2 mm (6 pack)
162-0030	Micro Plane, carbide blade
162-0040	Micro Plane, diamond blade
162-0045	Micro TouchPick Pen Set Includes pen with tip size 0.62 mm, pen with tip size 0.17 mm, scalpel/roller knife, cleaning compound and holder case
162-0048	Micro Vice-Mini
162-0046	Diamond Window, 2.5 mm aperture
162-0047	Diamond Window, 3.5 mm aperture
162-6401	3-Position Sample Slide (recommended selection of window or disk)
300-0025	Gold-Surfaced Mirror, 13 x 2 mm
034-3070	IR Microsampling Kit Includes 3-position sample slide with gold mirror, 2 KBr windows, scissors, tweezers, probes and roller knife with replacement blades

Note: For items not in this list please contact PIKE Technologies.

## Micro Diamond Cell – For Compressing and Holding Samples for Microanalysis



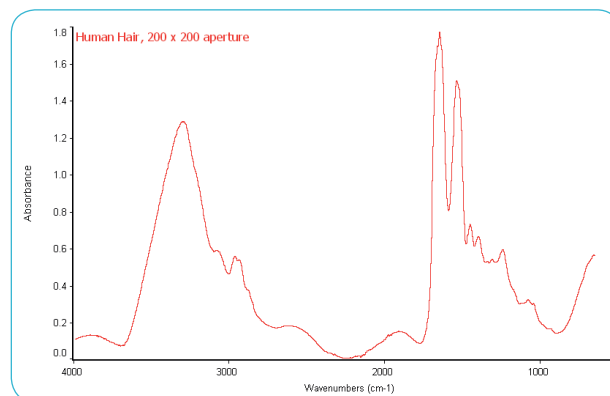
### FEATURES

- Compression and positioning for micro samples
- 1.6-or 2.0-mm clear aperture versions
- Easy thumb wheel mechanism for application of pressure
- Compatible with UV to far-IR spectral regions
- Compatible with PIKE  $\mu$ MAX IR microscope and beam condensers
- 14,000 psi pressure (10 kgf/mm<sup>2</sup>)

Small samples are easily held in place and flattened to ideal thicknesses for FTIR analysis using the PIKE Technologies Micro Diamond Cell. The diamond windows in this cell are Type IIa synthetic for excellent transmission from the UV through far-IR spectral regions. The hardness of diamond enables maximum pressure to be applied to all types of crystalline, fiber, or amorphous materials. Typical samples include fibers, paint chips, rubbers, and plastic materials including laminates.

The large clear aperture of the PIKE Technologies Micro Diamond Cell (either 1.6 or 2.0 mm) makes it easy to place the micro sample into position while viewing under a stereomicroscope. The large thumb wheels provide easy means of tightening and flattening the samples.

The PIKE Technologies Micro Diamond Cell is mounted on a standard 2" x 3" plate compatible with your FTIR spectrometer sample compartment. However, it performs best with a beam condenser or IR microscope. Cell thickness is 9.3 mm fully assembled.



*Human hair sample flattened in the PIKE Micro Diamond Cell and analyzed using the  $\mu$ MAX IR microscope.*

### ORDERING INFORMATION

PART NUMBER DESCRIPTION

162-0010	Micro Diamond Cell, 1.6 mm
162-0020	Micro Diamond Cell, 2.0 mm

Notes: The Micro Diamond Cell is easily placed onto the X, Y stage of the PIKE  $\mu$ MAX IR microscope. Mounting the Micro Diamond Cell into the PIKE beam condensers requires the optional slide holder.

# Compact Transmission/Reflection S-100R Microscope Heat Stage – High-Temp Measurements under Vacuum or Controlled Gas Flow



## FEATURES

- Compact design fits most stages of FTIR and Raman microscopes
- Direct transmission measurements in sample compartments of FTIR spectrometers
- Precise temperature control up to 600 °C
- Vacuum, reaction gas or inert gas chamber environment
- Easy sample loading, assembly and disassembly

The S-100R Microscope Heat Stage is designed for spectroscopic analysis and monitoring of small samples at varying temperatures. The accessory can be located directly on the sampling stages of most FTIR and Raman microscopes. It can also be used for transmission measurements when placed in the sample compartment of the spectrometer.

## SPECIFICATIONS

Stage Body	Aluminum
Aperture	Maximum: 4 mm, Minimum: 1 mm
Chamber Window	20 mm x 2 mm
Sample Port Window	13 mm x 1 mm
Leak Rate	Less than $1 \times 10^{-9}$ Pa/m <sup>3</sup> per second
Vacuum Achievable	$1 \times 10^{-3}$ Torr
Pressure Maximum	0.5 MPa (requires BaF <sub>2</sub> , CaF <sub>2</sub> , ZnSe, SiO <sub>2</sub> windows)
Gas Connection	1/16" Swagelok®
Coolant Connection	4-mm quick connection (optional)
Stage Dimensions (W x D x H)	84 x 100 x 16 mm
Stage Weight	0.5 kg
Temperature Control	Resistive heating
Temperature Range	Ambient to 600 °C
Accuracy	+/- 0.5%
Sensor Type	Type K thermocouple
Temperature Controllers	
Digital	+/- 0.5% of set point
Digital PC	+/- 0.5% of set point, graphical setup, up to 20 ramps, USB interface
Input Voltage	115/230 VAC, user-selectable
Output Voltage	115 VAC/80 W max.
Controller Dimensions (W x D x H)	130 x 230 x 210 mm

The stage features a lightweight aluminum body that is 16-mm thick. The sample is located between two IR transparent windows (transmission measurements) or between the IR reflecting mirror and single window (trans-reflection configuration). Samples can be easily loaded and removed by twisting the upper window plate by hand. Optional inserts for varying sample sizes and shapes are available and a wide selection of window materials can be used with the stage.

The accessory can be used under ambient conditions or under vacuum. Pressure up to 0.5 MPa is possible with appropriate windows. In addition, inert or reaction gas can be flowed through the stage chamber. Valves and connectors required for these special configurations should be ordered separately.

Temperature range of the S-100R Microscope Heat Stage spans from ambient to 600 °C, and is controlled with +/- 0.5% accuracy by digital controllers available in PC or dedicated configurations. PC option provides graphical parameter setup, ramping and USB connectivity. Liquid cooling is integrated into the accessory base in order to minimize heat transfer to the microscope stage, improve temperature stability and aid the cooling process.

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
162-4186	S-100R Microscope Heat Stage <i>Includes holders for 1, 2, and 3-mm samples, coolant tube and 13 x 1-mm reference mirror</i>

## TEMPERATURE CONTROLLERS (must select one)

PART NUMBER	DESCRIPTION
076-2460	S-100R Digital Temperature Controller, PC Control
076-2260	S-100R Digital Temperature Controller

## WINDOWS (must select)

- (1) 20 x 2 mm and (1) 13 x 1 mm for reflection measurement  
(2) 20 x 2 mm and (1) 13 x 1 mm for transmission measurement

PART NUMBER	DESCRIPTION
160-1134	Disk, KBr, 20 x 2 mm
160-1148	Disk, BaF <sub>2</sub> , 20 x 2 mm
160-1144	Disk, CaF <sub>2</sub> , 20 x 2 mm
160-5003	Disk, KBr, 13 x 1 mm, max temp 300 °C
160-1149	Disk, BaF <sub>2</sub> , 13 x 1 mm, max temp 500 °C
160-5001	Disk, CaF <sub>2</sub> , 13 x 1 mm, max temp 900 °C

Note: Maximum temperature restriction applies to sample window. The temperature of the outer windows is significantly less due to required liquid recirculated water flow.

## OPTIONS AND REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
162-4114	Plate for Motorized Microscope Stage*
162-4115	Slide Mount for transmission measurements, 2" x 3"
162-4116	Holder for 1, 2, 3-mm diameter samples
162-4109	Gas Valve, 1/16" (gas connection) – 2 needed
162-4110	Quick Connector for external circulating liquid – 2 needed
162-4111	Reference Mirror, 13 x 1 mm
170-1100	Liquid Recirculator

\*Must provide information for microscope make and model

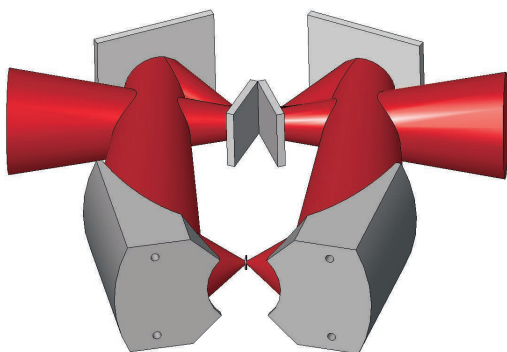
## Beam Condensers – 4X and 6X Versions for FTIR



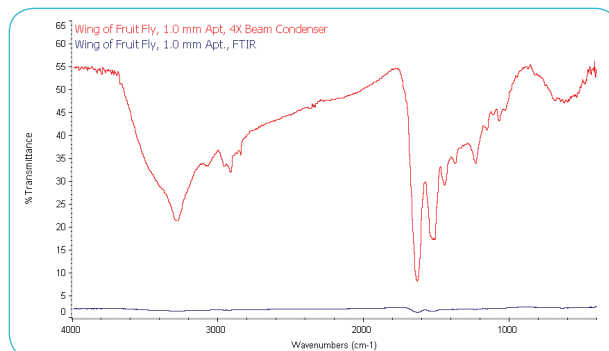
### FEATURES

- 4X and 6X versions – providing improved spectral data for microsampling
- High optical throughput – beam condensing optics provide higher signal-to-noise ratio for small samples
- Standard pin mounting for sample holders – providing a precise, reproducible mount for samples
- Standard sample holder block and alignment pinhole (1.5 mm)
- A variety of optional sample holders
- Enclosed accessory for complete purging

Basic beam condenser products have been available for many years. The PIKE Technologies Beam Condenser Accessories provide all the functionality of these basic systems with exceptional optical design and easy access to the sampling area. The unique enclosed optics provide a purged environment.



Beam Condenser optical diagram

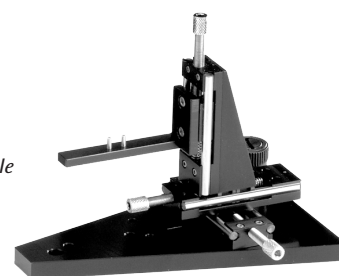


Wing of fruit fly within 1-mm aperture with and without use of a beam condenser.

Beam condensers offer easy transmission sampling with minimal sample preparation. The PIKE Technologies beam condensers are available in 4 and 6 times beam demagnification. The system design incorporates a layout of six mirrors, adjustable input and output mirrors and two matched 4:1 (or 6:1) ellipsoidal mirrors. Both provide a large working area to accept many types of transmission sampling accessories, including high-pressure diamond cells, liquid cells, mull cells, and micro holders. The sample area uses pins to ensure accurate and reproducible accessory alignment requiring no further adjustment. Either 4X or 6X beam condensers are available in standard or gold-coated optics for high-performance mid-IR or near-IR operation.

For the most demanding applications, a precision X, Y, Z Sampling Stage is available as an option, which accommodates all sampling accessories to achieve the highest possible optical throughput and allows a point-by-point surveying of an extended sample.

X, Y, Z Adjustable  
Sample Position





## Sample Holders for the PIKE Beam Condensers

A range of sample holders are available for making sample positioning easier. These may be mounted on the X, Y, Z stage for precision positioning or on the standard mount.

### Universal Spring Sample Holder

– ideal for small spheres and gems



### Magnetic Sample Holder

– ideal for 1 or 3-mm pellet die



### Micro KBr Pellet and Mull Holder

– ideal for very small volume solids, liquids and paste samples (holds 13-mm windows)



## SPECIFICATIONS

<b>Optics</b>	All reflective, aluminum (standard) Gold-coated (optional)
<b>Configurations</b>	4X and 6X demagnifications
<b>Sampling Options</b>	Standard sample holders X, Y, Z adjustable stage Pressure diamond cells and micro holders
<b>Purgeable</b>	Yes
<b>Dimensions</b> (W x D x H)	165 x 242 x 114 mm (4X) 165 x 318 x 114 mm (6X)
<b>FTIR Compatibility</b>	Most, specify model and type

## ORDERING INFORMATION

### 4X AND 6X BEAM CONDENSERS

#### PART NUMBER DESCRIPTION

031-40XX	4X Beam Condenser <i>Includes the Non-Adjustable Sample Position Stage, 1.5 mm alignment aperture, purge tubes and mount for the FTIR of your selection</i>
031-60XX	6X Beam Condenser <i>Includes the Non-Adjustable Sample Position Stage, 1.5 mm alignment aperture, purge tubes and mount for the FTIR of your selection</i>

Notes: Replace XX with your spectrometer's Instrument Code. [Click for List >](#)  
Contact PIKE Technologies for gold-coated mirror option.

### ADJUSTABLE SAMPLE POSITION (optional)

#### PART NUMBER DESCRIPTION

031-2010	X, Y, Z Adjustable Sample Position Stage
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Note: The X, Y, Z Adjustable Sample Position Stage can be easily exchanged with the Non-Adjustable Sample Position Stage.

### SAMPLE HOLDERS (optional)

#### PART NUMBER DESCRIPTION

031-2030	Universal Spring Sample Holder
031-2040	Magnetic Sample Holder
031-2050	Micro KBr Pellet and Mull Holder

Note: All of these sample holders fit to the pin position of either the Non-Adjustable Sample Position Stage or the X, Y, Z Adjustable Sample Position Stage.

### MICRO DIAMOND CELL (optional)

#### PART NUMBER DESCRIPTION

162-0010	Micro Diamond Cell, 1.6 mm
162-0020	Micro Diamond Cell, 2.0 mm
031-2070	Mounting Stage for Micro Diamond Cell

Notes: Micro Diamond Cell includes anvil pressure cell assembly and Type IIa diamonds. Stage for Micro Diamond Cell is required for use with beam condenser.

### BEAM CONDENSER REPLACEMENT PARTS

#### PART NUMBER DESCRIPTION

031-2020	Non-Adjustable Sample Position Stage
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Note: For options not listed here, please contact PIKE Technologies.

# ORDERING TERMS, CONTACT INFORMATION AND GUARANTEE

## PART NUMBERS AND PRICE

The PIKE price list includes accessories that may be used with a variety of makes and models of spectrometers. Please specify the part number and description when ordering, including your instrument type and model number. [Click here](#) for a list of spectrometer and spectrophotometer instrument codes. When placing an order, substitute these codes for the final two digits (XX) in the accessory part number.

PIKE Technologies is continually extending the accessory product range. If you are unable to find a required item, please contact us to discuss your needs. We will be glad to assist.

## PAYMENT TERMS

Purchase Order Number, cash in advance, MasterCard and Visa are acceptable. Payment is net 30 days, and shipments are FOB Madison, WI USA. Freight charges are prepaid and added to your invoice. If you wish to pay freight charges, please specify this on your order. Prepayment is required for international customers.

## INTERNATIONAL HANDLING FEE

For orders placed from outside the United States or Canada, a handling fee of \$40 will apply per order to cover the costs associated with the additional documentation and bank charges required for international shipments.

## WAYS TO ORDER

Many products are available for purchase directly through our website. These items are marked on our website with a red shopping cart icon.

Please include the following information when placing an order: your name, phone number, product part number, quantity, ship to address, bill to address, purchase order number and spectrometer model on which the accessory will be used.

Orders may be placed via mail, phone, fax, e-mail or on our website. We accept Visa and Mastercard via phone and direct online purchases. For security purposes, do not send credit card information via e-mail. An electronic order form is available on our website (for P.O. Numbers only – do not use this form for credit card orders). There is no minimum order requirement. Please use the following addresses and phone/fax numbers when placing your orders:

**PIKE Technologies, Inc.**  
6125 Cottonwood Drive  
Madison, WI 53719  
(608) 274-2721 (TEL)  
(608) 274-0103 (FAX)  
[orders@piketech.com](mailto:orders@piketech.com) (E-MAIL)  
[www.piketech.com](http://www.piketech.com)

## DELIVERY

The delivery/shipment date is confirmed upon receipt of an order. Special requirements and custom accessories are subject to different lead times. Please contact us for price quotes and delivery information on these products.

## GUARANTEE

All PIKE products are guaranteed to be free from defects in material and workmanship for a period of 12 months from the date of shipment. Should you be dissatisfied, or have any queries, please contact us immediately and we will promptly repair or replace the product at no charge.

## PRODUCT RETURNS

Please contact PIKE to receive your Return Material Authorization (RMA) number if you wish to return any of our products. A restocking fee may apply. Customers are responsible for shipping charges for all returned products. For products under warranty, back-to-customer shipping charges will be covered by PIKE. Please do not return any products without obtaining the RMA number first.

## TECHNICAL ASSISTANCE

PIKE Technologies offers comprehensive technical assistance. Please contact us via mail, phone, fax or e-mail with your questions.

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## FTIR INSTRUMENT CODES (XX)

### ABB Bomem

FTLA2000-100 (Arid Zone)	80
Michelson 100, MB Series	81
MB 3000	82

### Agilent

Excalibur™, Scimitar™, FTS, 600-IR Series	10
Excalibur™, Scimitar™, 600-IR Series with recognition	13

### Analect (See Hamilton Sundstrand)

### Bio-Rad (See Agilent)

### Bruker Optics

IFS™, Vector™, Equinox™ Series.	50
Tensor™, Vertex™ with recognition (Quick-Lock)	51

### Buck Scientific

M500	65
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### Digilab (See Agilent)

### Hamilton Sundstrand AIT

Diamond 20	60
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### Horiba

7000 Series	35
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### Interspectrum

Interspec 200-X	90
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### Jasco

300/600 Series	56
400	57
4000/6000 Series	58

### JEOL

Winspec™ Series	46
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### Lambda Scientific

Lambda FTIR 7600	66
Lambda FTIR 8600	64

### Lumex

INFRALUM FT-02, FT-08	67
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### Mattson (See Thermo Electron)

### Midac

M Series	30
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### Nicolet (See Thermo Electron)

Oriel	95
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### Optical Table

	99
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### PerkinElmer

1700 Series	70
Spectrum™ GX, 2000	71
Spectrum BX / RX, 1600, Paragon 1000	73
Frontier, Spectrum One, 65, 100, 400 with recognition	74
Spectrum Two with recognition	75

### Shimadzu

8300, 8400 Series, IRPrestige™-21, IRAffinity-1s	15
IRPrestige™-21, IRAffinity-1s with recognition (QuickStart)	16
IRTracer™-100	18
IRTracer™-100 with recognition	19

### Thermo Electron / Nicolet / Mattson

Infinity, Galaxy, RS Series	20
Genesis™, Satellite, IR 300	21
Impact™ 400, Magna, Protege™, 500 / 700 Series	40
Avatar™, Nexus™, Nicolet™, iS™10, iS™50	40
Model 205/210	41
Nicolet iS™5	42
Avatar, Nexus, Nicolet Series with recognition (Smart)	47

### Varian (see Agilent)

## UV-VIS INSTRUMENT CODES (XXX)

### Agilent/Varian

Cary 50	100
Cary 60	111
Cary 100, 300	110
Cary 4000, 5000, 6000i	120

### Jasco

600 Series	600
<b>Optical Table</b>	999

### PerkinElmer

Lambda 650, 750, 850, 950 and 1050	700
Lambda 25, 35, 45	730

### Shimadzu

1600 and 1700	200
1800 Series	210
2600	240
3600	220

### Thermo Fisher Scientific

Evolution 300/600	400
Evolution 200	410

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