

HOW TO RFP A

# NANO-STAGE (PIEZO-BASED NANO-POSITIONER)

What are your critical priorities for your new system?

What system are you using today?

What is the problem with the system that you are using today?

Did you review our Product Table?

How did you find us?

==== Caveats

\_\_\_ MCL stages are sold complete with drive electronics.

\_\_\_ MCL drive electronics are calibrated to their individual stage(s).

\_\_\_ MCL Terms & Conditions of sale apply.

\_\_\_ MCL will customize any design; NREs are the exception, not the rule!

==== Your Contact Details:

_____ טל _____	_____ שם _____
_____ פקס _____	_____ תפקיד _____
_____ נייד _____	_____ מחלקה _____
_____	_____ מוסד \ חברה _____

\_\_\_\_\_ @ \_\_\_\_\_ דואר אלק' \_\_\_\_\_

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## HOW TO RFP A NANO-STAGE (2p5)

=== Your Application: (describe!)

- |  |   |
|--|---|
| <input type="checkbox"/> AFM                                     | <input type="checkbox"/> Alignment                            |
| <input type="checkbox"/> Auto focus                              | <input type="checkbox"/> Beam Steering                        |
| <input type="checkbox"/> Closed-loop AFM scanning                | <input type="checkbox"/> Confocal imaging                     |
| <input type="checkbox"/> Displacement measuring                  | <input type="checkbox"/> FBG writing                          |
| <input type="checkbox"/> Fiber optics                            | <input type="checkbox"/> Fluorescence imaging                 |
| <input type="checkbox"/> High resolution probe positioning       | <input type="checkbox"/> High speed auto focus                |
| <input type="checkbox"/> High speed confocal imaging             | <input type="checkbox"/> High speed confocal microscopy       |
| <input type="checkbox"/> High speed laser beam steering          | <input type="checkbox"/> High speed lens focusing             |
| <input type="checkbox"/> High throughput fluorescence microscopy | <input type="checkbox"/> Hybrid positioning systems           |
| <input type="checkbox"/> Inspection, quality control             | <input type="checkbox"/> Interferometry                       |
| <input type="checkbox"/> Laser Beam Scanning                     | <input type="checkbox"/> Lithography                          |
| <input type="checkbox"/> Long range scanning                     | <input type="checkbox"/> Low temperature optical microscopy   |
| <input type="checkbox"/> MEMS                                    | <input type="checkbox"/> Metrology                            |
| <input type="checkbox"/> Microscope focusing                     | <input type="checkbox"/> Mirror positioning                   |
| <input type="checkbox"/> Nano-ergometer                          | <input type="checkbox"/> Nanoindenting                        |
| <input type="checkbox"/> Nanolithography                         | <input type="checkbox"/> Nanomanipulation                     |
| <input type="checkbox"/> Nanopositioner calibration              | <input type="checkbox"/> Off-axis loading with high stability |
| <input type="checkbox"/> Optical disk manufacturing              | <input type="checkbox"/> Optical fiber alignment              |
| <input type="checkbox"/> Optical microscopy                      | <input type="checkbox"/> Optical trap calibration & trapping  |
| <input type="checkbox"/> Particle tracking                       | <input type="checkbox"/> Position creep measurements          |
| <input type="checkbox"/> Precise positioning of heavy optics     | <input type="checkbox"/> Precision alignment                  |
| <input type="checkbox"/> Precision cryostat positioning          | <input type="checkbox"/> Quantum dot research                 |
| <input type="checkbox"/> Retrofit microscope                     | <input type="checkbox"/> Scanning microscopy                  |
| <input type="checkbox"/> SEM                                     | <input type="checkbox"/> Sensor assembly positioning          |
| <input type="checkbox"/> Single molecule spectroscopy            | <input type="checkbox"/> SPM                                  |
| <input type="checkbox"/> STORM and PALM imaging                  | <input type="checkbox"/> Surface analysis                     |
| <input type="checkbox"/> Surface metrology                       | <input type="checkbox"/> Transducer calibration               |
| <input type="checkbox"/> UHV atomic scale microscopy             | <input type="checkbox"/> VUV microscopy                       |
| <input type="checkbox"/> Wafer scanning and alignment            | <input type="checkbox"/> X-ray microscopy                     |
| <input type="checkbox"/> Other:                                  |   |

Details:

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## HOW TO RFP A NANO-STAGE (3p5)

=== Drive Electronics Options:

- Computer waveform generation & position feedback (to 50kHz).
- USB Computer Control: 16-bit Moderate Resolution, suitable for Optical Microscopy, 0/10 voltage only.
- USB Computer Control: 20-bit High Resolution, any voltage range.
- Image Scan Sync; TTL compatible pixel clock, line clock, and frame clock. Compatible with Becker & Hickl and Pico Quant TCSPC modules (Time Correlated Single Photon Counting). Requires USB interface (either).
- Veeco Breakout Box. Reduces Veeco NanoScope/Bioscope controller high voltage output signals to +/-10V. May be needed with the -10/+10 option.
- Custom Breakout Box: to customer specification.
- Custom BandWidth: specify a reduced bandwidth.
- Front panel open loop / closed loop switch.
- Scan Offset potentiometer.
- Circuit Board Only (OEMs).
- Joystick Control.
- Rack Mount kit.

Voltage Range:  0/+10  -10/+10  -6/+6  -5/+5

Distance from the Power Supply to the Nano-Stage:  (meters)

- LabView: Virtual Instruments, examples, tutorial.
- ImagePro: Advanced Microscopy Suite (AMS) analog motion control.
- MetaMorph: USB & analog motion control.
- uManager: open source microscopy software USB motion control.
- Other Software: (specify)

HOW TO RFP A NANO-STAGE (4p5)

=== Load:

Load Dimensions: \_\_\_ weight \_\_\_ length \_\_\_ width \_\_\_ height

Load Type: \_\_\_ sample holder \_\_\_ optical element \_\_\_ other (describe)

Mounting: (describe!)

=== X-axis motion:

\_\_\_\_\_ range (nm or degrees or radians)  
 \_\_\_\_\_ moves (distance, speed, hold time)  
 \_\_\_\_\_ waveform (sine, square, ?) & cycles (Hz)

=== Y-axis motion:

\_\_\_\_\_ range (nm or degrees or radians)  
 \_\_\_\_\_ moves (distance, speed, hold time)  
 \_\_\_\_\_ waveform (sine, square, ?) & cycles (Hz)

=== Z-axis motion:

\_\_\_\_\_ range (nm or degrees or radians)  
 \_\_\_\_\_ moves (distance, speed, hold time)  
 \_\_\_\_\_ waveform (sine, square, ?) & cycles (Hz)

=== Theta-X motion:

\_\_\_\_\_ range (nm or degrees or radians)  
 \_\_\_\_\_ moves (distance, speed, hold time)  
 \_\_\_\_\_ waveform (sine, square, ?) & cycles (Hz)

=== Theta-Y motion:

\_\_\_\_\_ range (nm or degrees or radians)  
 \_\_\_\_\_ moves (distance, speed, hold time)  
 \_\_\_\_\_ waveform (sine, square, ?) & cycles (Hz)

=== Theta-Z motion: (rotation)

\_\_\_\_\_ range (nm or degrees or radians)  
 \_\_\_\_\_ moves (distance, speed, hold time)  
 \_\_\_\_\_ waveform (sine, square, ?) & cycles (Hz)

HOW TO RFP A NANO-STAGE (5p5)

=== Motion Issues: (describe!)

- \_\_\_ accuracy:
- \_\_\_ repeatability:
- \_\_\_ creep:
- \_\_\_ hysteresis:
- \_\_\_ smoothness:
- \_\_\_ pitch/roll/yaw:

=== Stage:

maximum permissible dimensions: \_\_\_ mmX \_\_\_ mmY \_\_\_ mmZ \_\_\_ grams

design: \_\_\_ simple/rectangular \_\_\_ cylindrical/tubular \_\_\_ other:

aperture: \_\_\_ X-axis \_\_\_ Y-axis \_\_\_ diameter (circular)

add microstage: \_\_\_ manual stage (XY 25mm) \_\_\_ motorized stage (XY 25mm)

=== Environmental Issues: (describe!)

- \_\_\_ temp:
- \_\_\_ humidity:
- \_\_\_ vacuum:
- \_\_\_ shock:
- \_\_\_ vibration:

=== Questions? Please call us, today!

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***Bringing Advanced Technologies To The People Who Use Them***

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