

# IPZ-3000 Series Piezo Z-Axis Top Plate Insert



The IPZ-3000 series piezo inserts will fit in most microscope stages with the standard 110 mm x 160 mm (K-size) stage insert opening. The piezo insert uses the same proven technology as our 2000 series as a simple retrofit control on an existing XY stage. Several sample holders are available to fit the IPZ-3000 inserts for holding small dishes, slides or chambers. The piezo can be controlled with the MS-2000 controller, providing both USB and RS-232 communication to a host computer. Users with MS-2000 configuration for XY only can upgrade their controllers for Z control.

#### **Features**

- · Proven operation with many software packages
- Closed loop control of the Z-axis position for highly repeatable focusing
- Several travel ranges available: 150 um, 300 um, and 500 um.

# **IPZ 3000 Series Sample Holders**

IPZ-4001 Accepts a standard 1 x 3 slide, or a 35 mm petri dish.

IPZ-4002 Accepts a standard 2 x 3 slide, or a 50/60 mm petri dish.

IPZ-4003 Accepts the ASI I-2450 Autoclavable stainless steel rectangular chamber with replaceable 50 mm x 24 mm coverglass bottom, sealed in place by an O-ring. Outside dimension is 76.0 mm x 50.5 mm (2.99" x 1.99"). Inside diameter at bottom (viewable window) is 42.7 mm x 16.7 mm (1.68" x 0.65"). Height is 10.7 mm (0.42"). I-2450 must be purchased separately.

IPZ-5001 Holders accept 22 mm x 22 mm cover slip. The
Flusehd two stainless still spring clips keep sample in place.
The integrated ring allows rotating the sample.

IPZ-5003 The flushed IPZ-5001 sample holder sits cover slip
Recessed at .25" or 6.4 mm from the base while the recessed
IPZ-5003 sits it at .04" or 1 mm.

IPZ-5002 Holders accept 22 mm x 40 mm cover slip. The
 Flusehd two stainless still spring clips keep sample in place.
 The integrated ring allows rotating the sample.
 IPZ-5004 The flushed IPZ-5002 sample holder sits cover slip
 Recessed at .25" or 6.4 mm from the base while the recessed
 IPZ-5004 sits it at .04" or 1 mm.

## **ADEPT Piezo Controller Specifications**

| Specification                        | PZ-3150FT     | PZ-3300FT | PZ-3500FT |
|--------------------------------------|---------------|-----------|-----------|
| Piezo Travel<br>Range (+/- 5%)       | 150 um        | 300 um    | 500 um    |
| Piezo smallest<br>move / resolution* | 2.2 nm        | 4.5 nm    | 7.6 nm    |
| Maximum Load for full range travel   | 2Kg           | 1Kg       | 1Kg       |
| Transient Response time**            | 11 – 15 ms    |           |           |
| External Analog input (BNC)          | 0 to 10 Volts |           |           |
| Maximum Input Frequency              | 20 Hz         |           |           |
| Maximum Continuous<br>Output Current | 13mA          |           |           |

<sup>\*\*</sup>Insert only provides piezo Z positioning with nanometer accuracy. Requires modification of existing ASI controller or additional MS1 controller.

Requires IPZ-4000 series, or PI 545 series, sample holders sold separately.

### **Product Compatibility**

- Leica DMI3000, DMI4000, DMI5000, DMI6000, DMIRB, DMIRBE, DMIRE, DMIRE2
- Nikon Diaphot Eclipse TE2000, Eclipse Ti
- Olympus BX50WI, BX51WI, BX61WI, IX70, IX71, IX81
- Zeiss Axiovert 200, Axio Observer



