

# Z-INSERT

The beauty of the Z-INSERT is that it fits directly any standard 160mm x 110mm opening (K-type frame) which is used on most motorized stages provided by third party manufacturers. It provides a 128.5 mm by 86.5 mm opening that accepts directly any multi-well microplates with an SBS Standard 127.5 x 85 mm (5" x 3 1/3" ) footprint, for example, the 96-well microplate.

As an option, universal sample holder, rotary slide holders or Petri dish holder can be provided.

The Z-INSERT is compatible with the following stages :

ASI – MS-2000 Flat Top XY/XYZ motorized stage (a special version is needed for non-flat top stage)

Marzhauser – Scanning Stage SCAN IM 120x80

Prior – K type Frame

Ludl – BioPrecision2

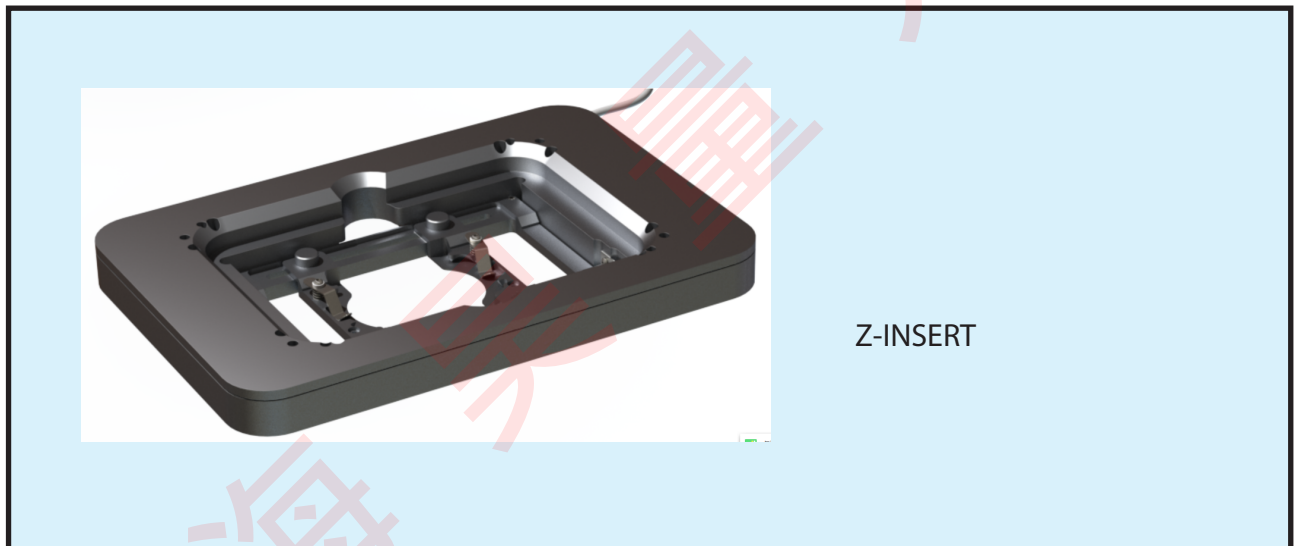
Zeiss – K type Frame

Nikon – Ti XY motorized stage (requires the Nikon Adapter plate, in order to reduce the aperture)

Olympus – IX3-SSU (requires the Olympus adapter plate, in order to reduce the aperture)

Leica – Regular 3-plate stage

The Z-INSERT is also compatible with most top-mounted incubation chambers (Digital Pixel, Tokai Hit, Okolab...).



## Features

- Travel ranges up to 500µm
- Low profile for easy integration
- Closed loop control
- Silicon sensor technology
- Less than 50pm noise floor

## Applications

- Z-stack
- Autofocus system
- Confocal microscopy
- Super Resolution microscopy
- Biotechnology

## Specifications

	Unit	Z-INSERT.100	Z-INSERT.200	Z-INSERT.300	Z-INSERT.500
Range of motion	( $\mu\text{m}$ )	100	200	300	500
Resolution	(nm)	0,1	0,2	0,3	0,5
Typical noise floor	(nm)	0,01	0,02	0,03	0,05
Full range repeatability	(nm)	0,2	0,4	0,6	1,0
Linearization (typical)		0,02%	0,02%	0,02%	0,02%
Resonant frequency	(Hz)	500	400	350	250
Stiffness	(N/ $\mu\text{m}$ )	0,6	0,5	0,4	0,25
Maximum load* :					
- horizontal use	(kg)	1	1	1	1
- vertical use	(kg)	0,5	0,5	0,5	0,5
Sensor		Silicon HR sensor	Silicon HR sensor	Silicon HR sensor	Silicon HR sensor
Size W x L x H	(mm)	148 x 220,5 x 27,3	148 x 220,5 x 27,3	148 x 220,5 x 27,3	148 x 220,5 x 27,3
Material		Al	Al	Al	Al
Cable length	(m)	2	2	2	2
Controller		Standard	Standard	Standard	Standard

\*Higher load on request

## Drawing

