

PZ 300 AP

CAP-measured multi-compatible z- positioner

Conception:

The low profile piezoelectrical microscopy stage is especially designed to suit microscopy applications e.g. super resolution microscopy and confocal fluorescence laser scanning. It allows seamless integration into most of the popular commercial motorized stages within upright and inverse microscopy assemblies. The stage opening supports sample holders and inserts that offer the multi-well standard e.g. multi-well and microtitre plates, slides, petri dishes, chambers, mini incubators... The sample plane is coincident to the illumination focus of inverted stages i.e. no condenser extender is necessary. Due to FEA optimization the dynamic behavior allows you to scan "step-by-step" at working frequencies up to 50Hz.

Advanced features:

The stage is equipped with an interface that allows seamless integration into a standard Frame K opening (160x110mm²) of manual and motorized microscope stages e.g. supported by Märzhäuser Scan IM series as well as Prior ProScan range. Due to its universal probe clamping it interchangeably accommodates any sample holders and inserts that have the standard multi-well size (128x86mm²). Its integrated direct measuring high resolution feedback system offers you the highest accuracy and nonlinearity and the most reliable positioning stability and repeatability.

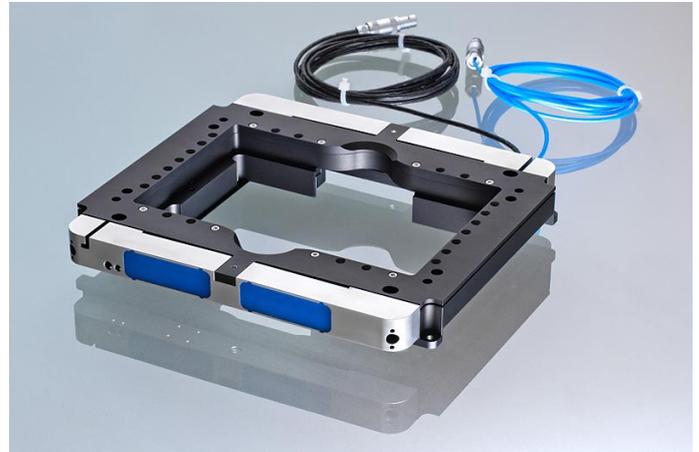


image: PZ 300 AP

Product highlights:

- low profile piezoelectrical microscopy Z-stage
- especially suited for confocal fluorescence laser scanning applications
- offers a travel range of 300 microns
- high resolution direct measuring capacitive metrology
- fits a standard Frame K opening
- supports standard multi-well size
- no condenser extender necessity

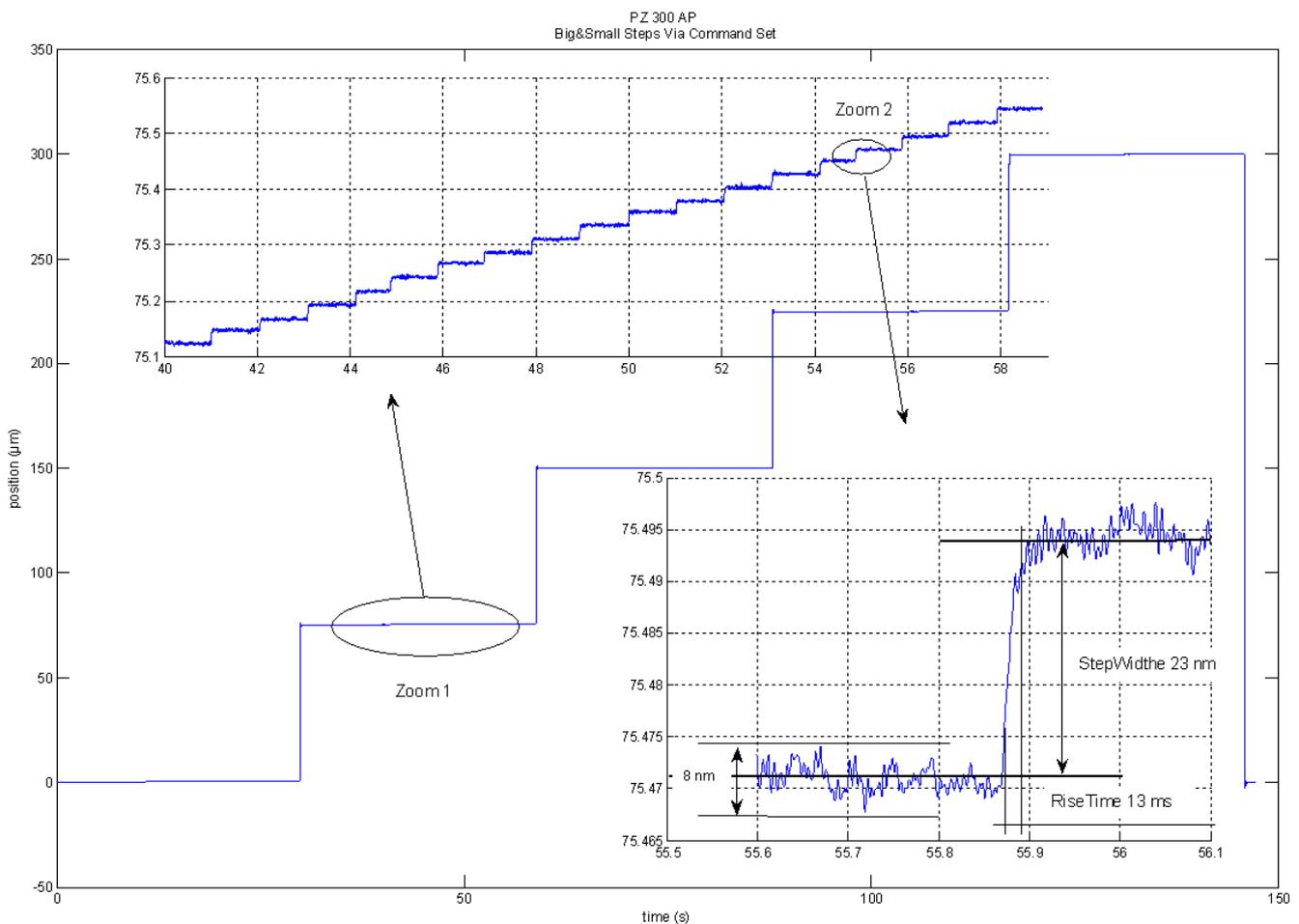
Applications:

- Fluorescence Microscopy, Confocal Microscopy, Laser Scanning Microscopy
- 3D Imagination, Surface Topology, Superresolution Microscopy

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Specials:

The stage series PZ 300 AP is special designed for fast scanning application to support microscopy imagine processes. Key feature are step response time and a low settling time. Typical values are shown below. Therefore, based on the given measured values a typical scan frequency of 50Hz guarantees the best performances. These offers for all kind of imagine processes in the area of biology, medicine and optic technology a superior positioning solution.



Recommended controller unit

Analog Controller	NV 120/1CLE	E-101-93	Output Current 120mA;	USB-Interface
Digital Controller	30DV50	E-754-300	Output Current: 50mA;	RS232

http://www.piezosystem.com/products_services/piezo_controller_and_amplifier/piezo_controller_1_channel_version/



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PZ 300 AP

Technical data

	unit	PZ 300 AP	PZ 300 CAP AP
part no.		T-113-00	T-113-06*
axis	-		z
travel range	µm		300
integrated measurement	-	without	CAP
resolution*** closed loop	nm	0.6	1
typ. repeatability***	nm / %	-	15 / 0.005
typ. non-linearity	%	-	0.07
resonant frequency (100g load)	Hz	190	190
settling time	ms	-	20
working frequency	Hz	50	50
step response (small signal)	ms	-	7
stiffness	N/µm		0.75
max. load	N		75
max. push force	N		300
max. pull force	N		120
Voltage range	V		-20...+130
temperature range	°C		+15...+35
connector**	voltage	-	LEMO 0S. 302
	sensor	-	LEMO 0S. 650
cable length	m		2
min. bend radius of cable	mm		>15
material	-	stainless steel (sides); aperture made of anodized Al	

* Please add suffix "D" while ordering when controller unit NV 120/1 or any digital controller unit is use

** stage is equipped with connector D-Sub 15 when part number is extended by suffix "D"

*** please have a look in our catalogue - chapter "general remarks" for explanation

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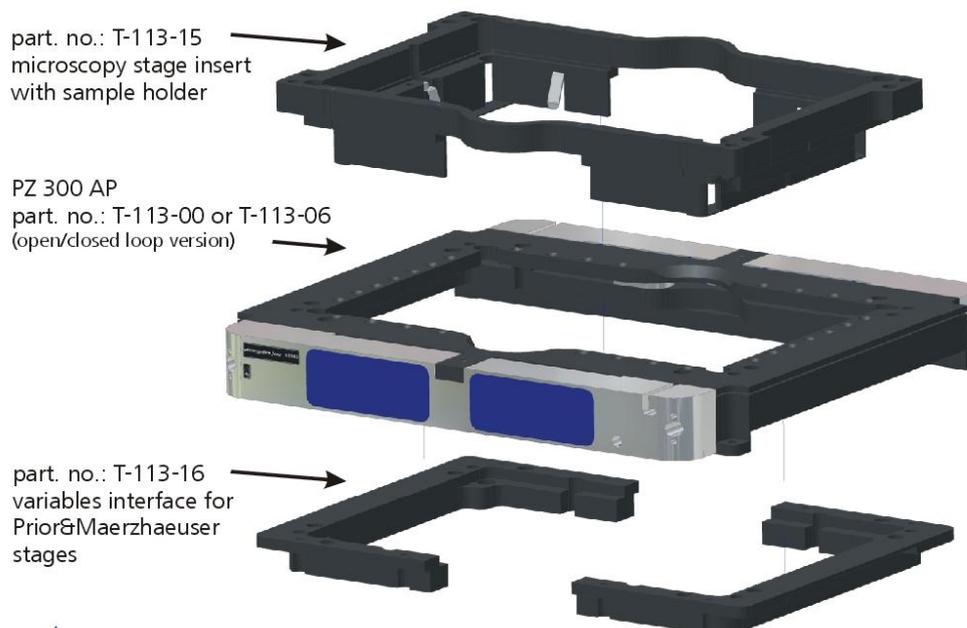
Stage configuration:

The low profile microscopy stage PZ 300 AP comes with different options for flexible use:

variation	components	consist of part. no.
alternative 1	PZ 300 CAP AP z-axis stage without adapters and accessories	T-113-06*
alternative 2	PZ 300 CAP AP z-axis stage without adapters and accessories - stage interface for Prior&Maerzhaeuser (please see list of compatibility below)	T-113-06* T-113-15
alternative 3	PZ 300 CAP AP z-axis stage without adapters and accessories - stage interface for Prior&Maerzhaeuser (please see list of compatibility below) microscopy stage insert for sample holders (e.g. Multiwell's or adapter with a size of 128x86mm ²)	T-113-06* T-113-15 T-113-16

* Please add suffix "D" while ordering when controller unit NV 120/1 or any digital controller unit is use!

system configuration PZ 300 AP with microscopy accessories



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List of compatibility by using stage adapter T-113-15

Märzhäuser SCAN IM

Zeiss AxioVert 200
Zeiss AxioObserver
Leica DMI 3000 – 5000
Leica DMI 5000M
Nikon Eclipse MA100
Nikon Eclipse MA200
Olympus BX45 / BX51/ BX61
Olympus WI /GX51 / GX71
Olympus IX51 / IX71 / IX81

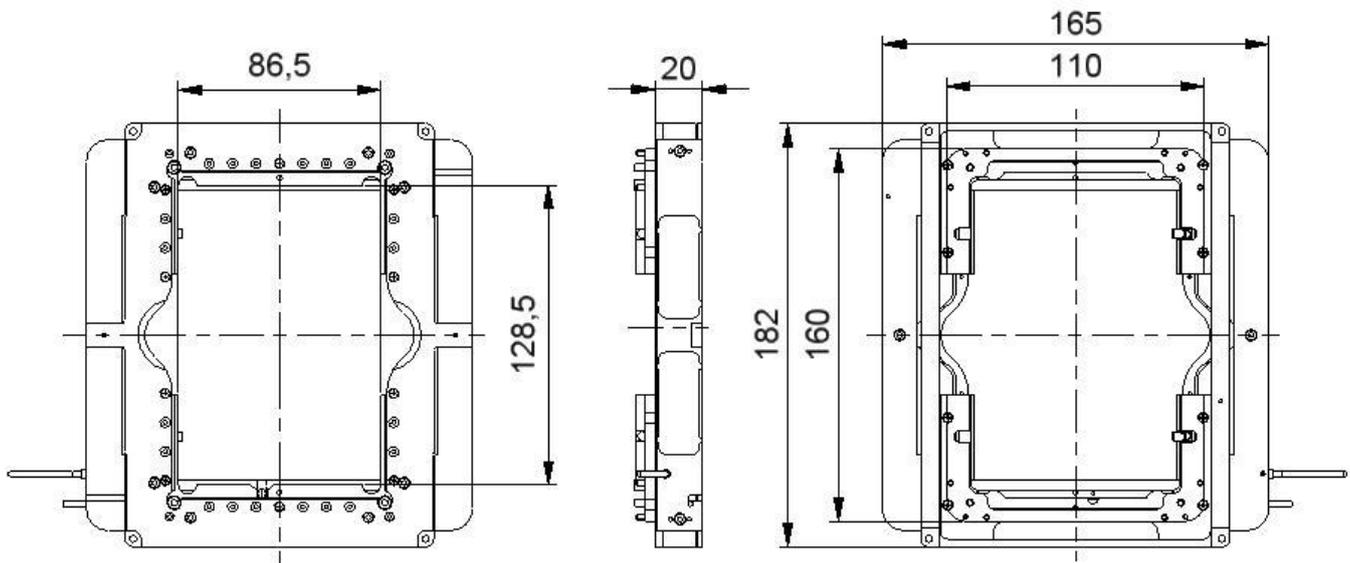
Prior ProScan H117

Zeiss AxioVert 200
Zeiss AxioObserver
Zeiss AxioObserver
Leica DMIRB
Leica DMI4000/5000/6000
Nikon TE2000/TI
Olympus IX51/71/81

Prior ProScan H101a

Zeiss AxioSkop
Zeiss Axioplan
Zeiss AxioImager
Leica DM – range
Nikon Eclipse - range
Olympus BX - range

Sketch & drawing



part no.: T-113-00 and T-113-06

Rights reserved to change specifications as progress occurs without notice!