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Selection Guides: Piezo Stages & Scanners, Piezo Systems

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>> [Microscopy Z-Stages / Objective Nanofocusing Systems](#)

Click Image for Data Sheet	Models*	Description	Axes	Travel [µm]	Sensor
	P-725	PIFOC® objective nanofocusing system, compact, light-weight, long travel ranges, QuickLock mounting system, direct metrology.	Z	100, 250, 400	Capacitive
	P-721.CDQ P-721.LLQ	PIFOC® objective nanofocusing system, very fast and accurate, with QuickLock mounting system, direct metrology.	Z	100	Capacitive / LVDT
	P-720	PIFOC® objective nanofocusing system, very compact, without sensors.	Z	100	-
	P-737	PIFOC® Z-axis microscopy piezo stage for high-resolution sample positioning and scanning	Z	to 250 µm	SGS
	P-541.Z	Low-profile Z-stage, 80 x 80 mm aperture.	Z ($\theta_x\theta_y$)	100	Capacitive / SGS

>> [Closed-Loop 1- and 2-Axis Stages with Strain Gauge Sensors](#)






Click Image for Data Sheet	Models*	Description	Axes	Travel [µm]	Sensor
	P-611.1 , P-611.2	Compact, low-cost X and XY nanopositioning stages.	X, XY	100	SGS
	P-714	Ultracompact XY- scanner, fast	XY	15	SGS


- >> [NEXACT® Nanopositioning Motor](#)
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- >> [Nanometers over Millimeters](#)
- >> [Ultra High Load Hexapod](#)
- >> [Fast Piezo Flexure Actuators](#)
- >> [Micro Piezo Motor Slide](#)
- >> [Low-Cost Piezo Z-Stage / Nanofocussing](#)
- >> [Semi Award for Piezo Motor](#)

>> **Closed-Loop Single-Axis Stages with Direct Metrology (Direct Metrology = Higher Accuracy)**

Click Image for Data Sheet	Models*	Description	Axes	Travel [µm]	Sensor
	P-783	Nanopositioning Z-stage, long travel range, closed-loop, compact.	Z	300	LVDT
	P-620.Z - P-622.Z	PIHera® Z-axis nanopositioners, compact, very accurate, long travel range.	Z	50, 100, 250	Capacitive
	P-772	Nanopositioning stage, very compact, fast and accurate	X	10	-
	P-780	Nanopositioning stage, compact, fast, stainless steel	X	80	LVDT
	P-750	High-load nanopositioning stage, very good guidance, high stiffness.	X	75	Capacitive / LVDT
	P-752	Nanopositioning stage. Very fast and accurate, outstanding guiding accuracy.	X	15, 30	Capacitive
	P-753	Nanopositioning stage and actuator in one, very compact, fast and accurate.	Z & X	12, 25, 38	Capacitive
	P-620.1 - P-629.1	PIHera® piezo nanopositioners, compact, very accurate, long travel ranges, excellent value	X (XY, Z)	50, 100, 250, 500, 1000, 1800	Capacitive
	M-714	Hybrid Z-stage. DC-servo + piezo drive. Extremely Accurate. 2 nm Linear Encoder.	Z	7	Incremental
	M-511.HD	Hybrid translation stages with DC motors and piezo drives. Extremely accurate. 4 nm Linear Encoder.	X	100	Incremental

>> **Multi-Axis Stages, Modular Stages (Serial Kinematics)**



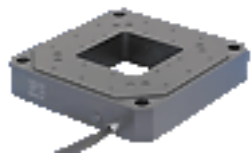
Click Image for Data Sheet	Models*	Description	Axes	Travel [µm]	Sensor
	P-281 / P-282	Compact open-loop, modular, nanopositioning stages.	XY, XYZ	30, 50, 100	-
	P-612.2	Compact, low-cost, XY stage. 100 x 100 µm travel, clear aperture.	XY	100 x 100	SGS
	P-611.1, P-611.2	Compact, low-cost X and XY nanopositioning stages.	X, XY	100	SGS
	P-611.ZS, P-611.XZS	Compact, low-cost X and XY nanopositioning stages.	Z, XZ	100	SGS
	P-611.3	NanoCube® XYZ piezo alignment system, compact, very cost-effective.	XYZ	100	SGS

	P-620.2 - P-629.2	PIHera® XY piezo nanopositioners, Very compact & accurate (direct metrology), long travel range.	XY (Z, XYZ)	50, 100, 250, 500, 1000, 1800	Capacitive
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>> Multi-Axis Stages, Parallel Kinematics / Parallel Metrology
(Parallel kinematics and parallel metrology allow active trajectory control, better dynamics and higher multi-axis precision)

Click Image for Data Sheet	Models*	Description	Axes	Travel [µm]	Sensor
	P-714	Compact XY scanner, low profile 45 x 45 x 6 mm.	XY	15	SGS
	P-615	NanoCube® 350C XYZ piezo alignment system, clear aperture, ideal for fiber alignment.	XYZ	to 350 / Axis	Capacitive
	P-363	PicoCube® high-precision system for AFM, SPM, nanomanipulation; 50 picometer resolution.	XY, XYZ	5 / Axis	Capacitive
	P-541 P-542	Low profile XY scanning piezostage 80 x 80 mm aperture.	XY	to 200 in XY	Capacitive
	P-733	XY(Z) piezo scanning piezostage 50 x 50 mm aperture, vacuum versions available.	XY(Z)	100 x 100 (x 10)	Capacitive
	P-733.2DD / P-733.3DD	High-speed scanning piezostage, XY and XYZ versions, ideal for tasks like scanning microscopy.	XY, XYZ	30 x 30 (x10)	Capacitive
	P-734	XY nanoscanning piezostage, extremely flat and straight (1 – 2 nm); 56 x 56 mm clear aperture..	XY	100 x 100	Capacitive
	P-770	XY nanopositioning piezostage, 200 x 200 mm clear aperture.	XY	200 x 200	LVDT
	P-517 - P-527	Multi-axis piezostage 66 x 66 mm clear aperture, custom model with 6 degrees of freedom available.	XY, XYZ, XYθ _z	to 200 in XY, 10 in Z, to 2 mrad	Capacitive
	P-561.3DD	PIMars™ XYZ scanning stages, faster, direct drive, excellent guidance, 66 x 66 mm clear aperture.	XY, XYZ	45 XY, 11 Z	Capacitive
	P-561 - P-563	PIMars™ multi-axis piezostage; travel range to 300 x 300 x 300 µm , 66 x 66 mm clear aperture, custom model with 6 degrees of freedom available.	XY, XYZ	to 300 x 300 x 300	Capacitive
	P-518 - P-558	Z-axis and tip/tilt piezostage platforms clear aperture	Z, θ _x θ _y	to 200 in Z, 4 mrad	Capacitive
	P-587	6-axis-nanopositioning stage.	XYZ, θ _x θ _y θ _z	up to 800 / 10 mrad	Capacitive

>> Z-Axis and Tip/Tilt Platforms >> For Fast Steering Platforms: click here



Click Image for Data Sheet	Models*	Description	Axes	Travel [µm]	Sensor
	P-737	PIFOC® Z-axis microscopy piezo stage for high-resolution sample positioning and scanning	Z	to 250 µm	SGS
	P-541.Z	Low-profile Z-stage, 80 x 80 mm aperture.	Z & Z, Tip/Tilt	100	Capacitive / SGS
	P-518 - P-558	Z-axis and tip/tilt piezostage platforms 66 x 66 mm clear aperture	Z & Z, Tip/Tilt	to 200 in Z, 4 mrad	Capacitive

	P-732.ZC	High-Dynamics Vertical Nanopositioning/Scanning Stage	Z	15	Capacitive
	P-612.Z	Compact, Low-Cost, Z Stage	Z	100	SGS
	P-620.Z - P-622.Z	PIHera® Z-axis nanopositioners, compact, very accurate, long travel range.	Z	50, 100, 250	Capacitive
	P-611.ZS, P-611.XZS	Compact, low-cost Z and XY nanopositioning piezostage	Z, XZ	100	SGS
	P-783	Nanopositioning Z-stage. Long travel range, compact.	Z	300	LVDT
	P-601	Closed-loop, with flexure guidance	Z	110, 300, 400	SGS
	P-290	Nanopositioning Z-stage, very long travel range, open-loop.	Z	1000	-
	P-287	Z-axis and tip/tilt nanopositioning piezostage, long travel range, open-loop.	Z, θ_x	700, 12 mrad	-
	M-714	Hybrid Nanopositioning Z-stage, ultra-long travel range, high load, DC-servo + piezo drives.	Z	7000	Glass scale




[>> For Tip/Tilt Mirror Platforms click here](#)

>> Scanning (Microscopy) Piezo-Stage Systems with Clear Aperture



Click Image for Data Sheet	Models*	Description	Axes	Travel [μm]	Sensor
	P-725	PIFOC® objective nanofocusing system, compact, light-weight, long travel ranges, QuickLock mounting system, direct metrology	Z	100, 250, 400	Capacitive
	P-721.CDQ P-721.LLQ	PIFOC®. objective nanofocusing system, very fast and accurate, with QuickLock mounting system, direct metrology.	Z	100	Capacitive / LVDT
	P-737	PIFOC® Z-axis microscopy piezo stage for high-resolution sample positioning and scanning	Z	to 250 μm	SGS
	P-732.ZC	High-Dynamics Vertical Nanopositioning/Scanning Piezostage	Z	15	Capacitive
	P-612.Z	Compact, Low-Cost, Z Stage	Z	100	SGS
	P-541.Z	Low-profile Z-stage, 80 x 80 mm aperture	Z & Z, Tip/Tilt	100	Capacitive / SGS
	P-518 - P-558	Z-axis and tip/tilt platforms clear aperture, Tip/Tilt	Z & Z	to 200 in Z, 4 mrad	Capacitive
	P-714	Ultracompact XY- scanner, fast	XY	15	SGS

	P-612.2	Compact, low-cost, XY stage. 100 x 100 μm travel, clear aperture.	XY	100 x 100	SGS
	P-541 P-542	Low profile XY scanning stage, 80 x 80 mm aperture, high-speed direct drive version available.	XY	to 200 in XY	Capacitive / SGS
	P-733	XY(Z) piezo scanning piezostage, 50 x 50 mm aperture, vacuum versions available.	XY(Z)	100 x 100 (x 10)	Capacitive
	P-733.2DD , P-733.3DD	High-speed scanning piezostage, XY and XYZ versions, ideal for tasks like scanning microscopy	XY, XYZ	30 x 30 (x10)	Capacitive
	P-734	XY nanoscanning stage, extremely flat and straight (1 – 2 nm); 56 x 56 mm clear aperture.	XY	100 x 100	Capacitive
	P-770	XY nanopositioning piezostage. 200 x 200 mm clear aperture.	XY	200 x 200	LVDT
	P-517 , P-527	Multi-axis stage 66 x 66 mm clear aperture, custom model with 6 degrees of freedom available.	XY, XYZ, $XY\theta_z$	to 200 in XY, 20 in Z, to 4 mrad	Capacitive
	P-561 - P-563	PIMars™ multi-axis piezostage, travel range to 300 x 300 x 300 μm , 66 x 66 mm clear aperture, custom model with 6 degrees of freedom available	XY, XYZ	to 300 x 300 x 300	Capacitive

>> **NEXLINE® / NEXACT® Long Travel Nanopositioning / Picopositioning Drives**

Click Image for Data Sheet	Models*	Description	Load Capacity [kg]	Travel [mm]	Drive
	N-111	NEXLINE® PiezoWalk® nanopositioning drive, subnanometer resolution.	8	5	Piezo-Walk®
	N-214	NEXLINE® PiezoWalk® high-load nanopositioning drive, subnanometer resolution.	60	20	Piezo-Walk®
	N-310	NEXACT® Ultra-compact nanopositioning drive, subnanometer resolution.	1	20	Piezo-Walk®

>> **6-Axis Parallel Kinematics Stages**

Click Image for Data Sheet	Models*	Description	Axes	Travel [μm]	Sensor
	P-587	6-axis-nanopositioning Piezostage	XYZ, $\theta_x\theta_y\theta_z$	up to 800 / 10 mrad	Capacitive
	P-911k	NEXLINE® Piezo-Hexapod High-Load 6-Axis Nanopositioning System	XYZ, $\theta_x\theta_y\theta_z$	to 10 mm / 6 deg.	Linear Scale

[Further Information on 6-Axis Hexapod Systems](#)

* Ask about custom sizes, sensors or special designs. Capacitive and LVDT sensors are direct metrology devices. Capacitive sensors provide the highest accuracy, bandwidth and linearity.

>> [Download the Piezo-Stage Nanopositioning & Scanning Systems PDF Catalog](#)

>> [Download the Complete PI PDF Catalog](#)