



Technical Data

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Technical Data	Nano-Plotter™ NP 1.2	Nano-Plotter™ NP 2	
		NP 2.1	NP 2.1/E
XYZ positioning system	Stepping motors and belt drives for XY movement, cable drive for Z-movement		
Dispensing area / slide tray (width x depth)	260 x 270 mm (printable area with one tip)	302 x 410 mm (outer dimensions slide tray)	648 x 410 mm (outer dimensions slide tray)
Max. pipetting height	~ 43 mm	~ 50 mm	
Traversing range in XY-direction (width x depth)	43 x 27 cm	42 x 34 cm	77 x 34 cm
Mechanical repeatability	± 50 µm	± 10 µm	
XY speed	0...40 cm/s	0...50 cm/s	
Step width	5 µm	2 µm	
Pipetting channels	1...8	1...16	
Wash and dry station	Separate cleaning of each tip inside and out	ditto, 2nd wash station optional	
Syringe pump (dilutor) for sample uptake and washing	250 µl syringe, 3000 steps, variation coefficient of accuracy ≤ 0,05 % when running with full stroke, variation coefficient of accuracy < 1 % at full stroke, one motor step is equivalent to approx. 83 nl Operating directions of three-way valve: 1. reservoir → syringe, 2. syringe → micropipette, 3. reservoir → micropipette		
Piezoelectric tip Nano-Tip / Nano-Tip A	Droplet volume ~ 400 pl / ~ 250 pl, up to 1000 Hz		
Piezoelectric tip Pico-Tip / Pico-Tip A	Droplet volume ~ 100 pl / ~ 50 pl		
Dead volume of the tips	~ 0.8 µl		
Dispensing precision (CV)	< 5 % for dispensing 10 droplets, < 2 % for dispensing 100 droplets (water)		
Software	Graphic user interface <u>Interactive mode</u> : manual access to all system components <u>Run mode</u> : processing of automatic pipetting procedures (many included, simulation of the programs possible) <u>Edit mode</u> : graphic definition of the work plate (slides + microtiter plate); optional: development of pipetting procedures (NPL scripts) System requirements: Windows 98/2000/XP (Vista in preparation), 1 GHz, 512 MB RAM, RS-232 interface, PCI slot or USB 2.0		
Accessories	Automatic function test of the tips (StroboCheck), microtiter plate cooling, humidification, (chilled) slide tray, target camera	Automatic function test of the tips (StroboCheck), cooling of microtiter plate + slide tray, humidification, automatic detection of small dispense targets, automatic plate handler, target camera	





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	Nano-Plotter™ NP1.2	Nano-Plotter™ NP2	
		NP 2.1	NP 2.1/E
Setup requirements			
Dimensions, including hood (W x D x H)	79 x 53 x 52 cm	63 x 53 x 38 cm	98 x 53 x 38 cm
Weight (incl. hood)	15 kg	~ 30 kg	~ 50 kg
Power supply	110...240 V, max. 200 W		
Hardware requirements	PC with Windows 98/NT/2000/XP, 512 MB RAM, RS-232, PCI slot or USB 2.0		
Pipetting performance			
Single-spot pipetting	max. 1200 spots/cm ²	max. 4000 spots/cm ²	
Dispensing of a single sample	max. 4000 spots/cm ²	> 5000 spots/cm ²	
Slide capacity (25 x 75 mm)	40	55 (or 6 microplates)	120 (or 12 microplates)
Throughput	30...120 min for 96 samples (simultaneous pipetting with 4 tips), dependent on array layout and number of arrays		
Microtiter plate	96 or 384-well format		
Min. sample volume / min sample uptake	5 µl / 0.5 µl		