

multi-dimensional translation stages microTRITOR / miniTRITOR

- highly compact design results in superior performance
- accurate parallel motion by parallelogram design
- high reliability due to solid state hinges
- motion without mechanical play
- high resolution in nm and sub-nm range
- motion up to 38 μm

applications:

- optics, laser tuning, fiber positioning
- micro manipulation, biology
- scanning systems
- vacuum and low temperature applications



miniTRITOR 38 V

piezosystem jena was the first to introduce the compact XYZ nano-positioning stage TRITOR, and we can now stand behind this system as the only company with over 10 years experience in designing and manufacturing of this three axis stage. The unique TRITOR elements are extremely compact but offer motions of up to 38 μm in all three axes. Parallel motion is achieved without play due to the mechanical design. TRITOR elements can be easily combined with other mechanical positioning systems.

mounting instructions:

TRITOR elements consist of actuators integrated in a housing with an internal lever transmission. Since the lever mechanism works in both directions, forces between housing and top plate need to be avoided, as they could damage the stage.

The stage is attached by using two diagonal holes. Components can be mounted on the top plate or on the base plate by two diagonal tapped holes.

series TRITOR			microTRITOR	miniTRITOR 38
part no.	unit		T-401-02	T-401-00
axes	-		x, y, Z	x, y, Z
motion ($\pm 10\%$)**	Km		9	38
operating voltage	V		-10...150	-10...150
capacitance each dir. ($\pm 10\%$)***	KF		0.07	0.7
resolution*	nm		0.02	0.08
resonant frequency	x-direction	Hz	21 00@20g	540
	y- direction	Hz	2230@20g	600
	z- direction	Hz	2290@20g	500
stiffness	x- direction	N/Km	1.0	0.25
	y- direction	N/Km	1.0	0.25
	z- direction	N/Km	1.0	0.25
blocking force	x- direction	N	9.5	19
	y- direction	N	9.5	19
	z- direction	N	9.5	16
dimensions	length L	mm	15	19
	width B	mm	15	19
	height H	mm	15	16
distance of drills	C	mm	10	10
	hole P	mm	10	10
connector	voltage	-	FFA.OS.250	FFA.OS.250
weight	g		12	57

* measured with E-240-1 00 amplifier

** typ. value measured with -1 0V to 1 50V

*** typ. typ. value for small electrical field strength