

VULCANO Platform

ETEL

VULCANO MOTION PLATFORM

A modular design

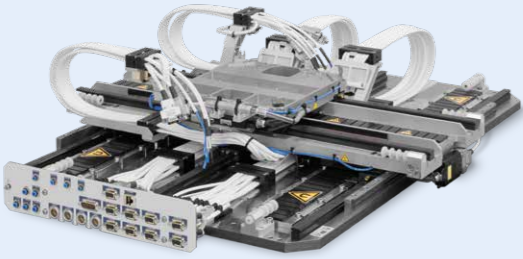


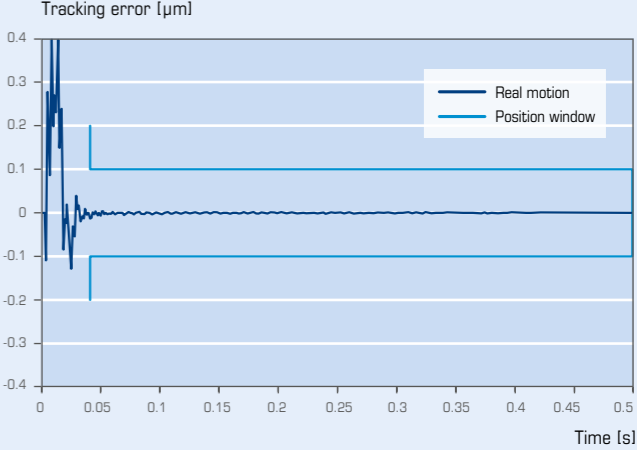
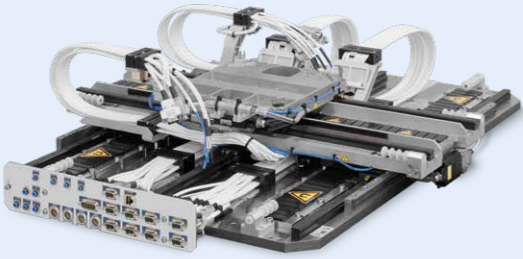

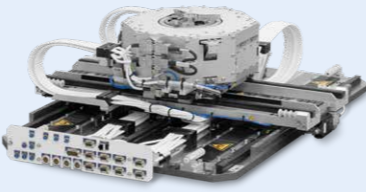
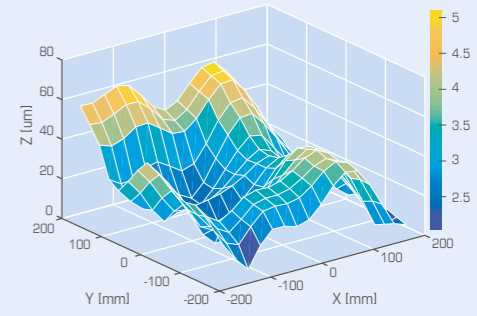
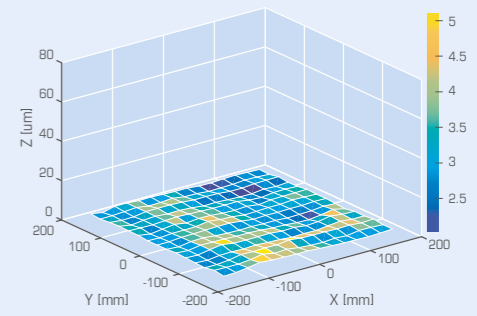
The Vulcano stage provides high dynamics, great bidirectional repeatability and outstanding position stability performance as well as short move and settle time due to the stiffness and symmetry of the mechanical design. This platform is equipped with a built-in vacuum suction device allowing ISO1 clean room compatibility. The stage is easily configurable and can be outfitted with different modules (Theta, ZT or Z3T) to best suit each individual application. The use of this platform is suitable for (but not limited to) Wafer Process Control applications such as Overlay Metrology, Critical Dimension and Thin film Metrology as well as other Back-end processes made on large panels / substrates.

COMPLETE SOLUTION

ETEL Forward Integration

ETEL is pushing ahead with its Forward Integration Strategy. An advanced motion platforms from ETEL will include not only the advanced motion system and its associated state-of-the-art motion controllers, but can also benefit from ETEL's QuiET active isolation system. This makes ETEL the only motion system supplier able to cover such a wide scope of supply!



VULCANO XY	STANDARD MODULES	MOTION SYSTEMS PLATFORM	MOTION SYSTEM PERFORMANCE	TYPICAL MEASUREMENT																																																																																
<p>The Vulcano XY system is a three-piece-design allowing a compact and cost engineered solution, coupled to mechanical bearings and high-end optical encoders.</p> <p>The bottom axis is composed of two linear motors controlled in a gantry mode moving on three decoupled linear bearings.</p> <p>The upper linear motor lays on a stiff and light baseplate allowing travels up to 650 mm on a standard.</p>  <table border="1"> <thead> <tr> <th></th> <th>Y1-Y2</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>Travel range</td> <td>up to 650 mm</td> <td>up to 650 mm</td> </tr> <tr> <td>Maximum speed</td> <td>2 m/s</td> <td>2 m/s</td> </tr> <tr> <td>Maximum acceleration</td> <td>25 m/s²</td> <td>25 m/s²</td> </tr> <tr> <td>Position stability</td> <td colspan="2">down to ±0.7 nm</td> </tr> <tr> <td>Bidir. repeatability</td> <td colspan="2">±350 nm</td> </tr> <tr> <td>Move and settle times (25 mm within ±100 nm)</td> <td>150 ms</td> <td>140 ms</td> </tr> <tr> <td>Maximum payload</td> <td colspan="2">40 kg</td> </tr> </tbody> </table>		Y1-Y2	X	Travel range	up to 650 mm	up to 650 mm	Maximum speed	2 m/s	2 m/s	Maximum acceleration	25 m/s ²	25 m/s ²	Position stability	down to ±0.7 nm		Bidir. repeatability	±350 nm		Move and settle times (25 mm within ±100 nm)	150 ms	140 ms	Maximum payload	40 kg		<p>RTTB ROTARY AXIS</p> 	<p>VULCANO XYT</p>  <p>The Vulcano XYT platform is made up of the standard Vulcano XY outfitted with the RTTB rotary module which includes high resolution encoder coupled to a high-end mechanical bearing.</p>	<ul style="list-style-type: none"> Compact footprint Nanometer position stability Short move and settle times High dynamics High bidirectional repeatability High position stability ISO1 clean room compatibility <table border="1"> <thead> <tr> <th></th> <th>Y1-Y2</th> <th>X</th> <th>THETA</th> </tr> </thead> <tbody> <tr> <td>Travel range</td> <td>490 mm</td> <td>420 mm</td> <td>367°±2°</td> </tr> <tr> <td>Maximum speed</td> <td>1.5 m/s</td> <td>1.5 m/s</td> <td>60 rpm</td> </tr> <tr> <td>Maximum acceleration</td> <td>25 m/s²</td> <td>25 m/s²</td> <td>169 rad/s²</td> </tr> <tr> <td>Position stability</td> <td>±1.1 nm</td> <td>±0.8 nm</td> <td>±1.9 nm @ R=150 mm</td> </tr> <tr> <td>Bidir. repeatability</td> <td colspan="2">±350 nm</td> <td>±0.3 arcsec</td> </tr> <tr> <td>Move and settle times (25 mm within ±100 nm)</td> <td>150 ms</td> <td>140 ms</td> <td>-</td> </tr> <tr> <td>Maximum payload</td> <td>-</td> <td>-</td> <td>30 kg</td> </tr> </tbody> </table>		Y1-Y2	X	THETA	Travel range	490 mm	420 mm	367°±2°	Maximum speed	1.5 m/s	1.5 m/s	60 rpm	Maximum acceleration	25 m/s ²	25 m/s ²	169 rad/s ²	Position stability	±1.1 nm	±0.8 nm	±1.9 nm @ R=150 mm	Bidir. repeatability	±350 nm		±0.3 arcsec	Move and settle times (25 mm within ±100 nm)	150 ms	140 ms	-	Maximum payload	-	-	30 kg	<p>MOVE AND SETTLE TIME 10 μm ± 100 nm</p> 																								
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HEADQUARTERS

ETEL S.A.

Zone Industrielle
CH - 2112 Môtiers
Switzerland

T +41 (0)32 862 01 00
F +41 (0)32 862 01 01
etel@etel.ch · www.etel.ch

GROUP SUBSIDIARIES AND SALES OFFICES

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OTHER COUNTRIES • internationalsales@etel.ch

REPRESENTATIVES

ISRAEL • comotech@medital.co.il
SPAIN • farresa@farresa.es

ETEL