VULCANO Platform
**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 QuET active isolation system. This makes ETEL the only motion system supplier able to cover such a wide scope of supply!

---

**VULCANO XY**

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.

The bottom axis is composed of two linear motors controlled in a gantry mode moving on three decoupled linear bearings. The upper linear motor lays on a stiff and light baseplate allowing travels up to 650 mm on a standard.

**STANDARD MODULES**

- **RTTB ROTARY AXIS**
  - The Vulcano X-YT 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.

**MOTION SYSTEMS PLATFORM**

- **VULCANO X-YT**
  - The Vulcano X-YT platform is made up of the standard Vulcano XY outfitted with the Z3T combined module. This 4 degrees of freedom module provides 360° Theta rotation, double Z-axes, a coarse one for wafer loading and unloading, and a fine one for focus adjustment, as well as a Tip-Tilt correction over ±0.1°.

**MOTION SYSTEM PERFORMANCE**

- **Y1-Y2**
  - Y1-Y2: up to 650 mm
  - X: up to 650 mm
  - Maximum speed: 2 m/s
  - Maximum acceleration: 25 m/s²

- **VULCANO XYT**
  - Y1-Y2: 400 mm
  - X: 400 mm
  - Maximum speed: 1.5 m/s
  - Maximum acceleration: 15 m/s²

- **VULCANO XY3T°**
  - Y1-Y2: 400 mm
  - X: 400 mm
  - Maximum speed: 1.5 m/s
  - Maximum acceleration: 15 m/s²

**TYPICAL MEASUREMENT**

- **FLATNESS**
  - ±100 nm
  - ±100 nm
  - ±100 nm

- **MOVE AND SETTLE TIME**
  - RTTB: ±0.001 arcsec
  - Z3T: ±0.0038 arcsec
  - Theta: ±0.0043 arcsec

---

**VULCANO MOTION PLATFORM**

---

**TYPICAL MEASUREMENT**

- **FLATNESS**
  - ±100 nm
  - ±100 nm
  - ±100 nm

- **MOVE AND SETTLE TIME**
  - RTTB: ±0.001 arcsec
  - Z3T: ±0.0038 arcsec
  - Theta: ±0.0043 arcsec

---

**VULCANO MOTION PLATFORM**

---

**TYPICAL MEASUREMENT**

- **FLATNESS**
  - ±100 nm
  - ±100 nm
  - ±100 nm

- **MOVE AND SETTLE TIME**
  - RTTB: ±0.001 arcsec
  - Z3T: ±0.0038 arcsec
  - Theta: ±0.0043 arcsec
GROUP SUBSIDIARIES AND SALES OFFICES

AMERICAS • info@heidenhain.com
BELGIUM • sales@heidenhain.be
CHINA • sales@heidenhain.com.cn
CZECH REPUBLIC • heidenhain@heidenhain.cz
FRANCE • sales@heidenhain.fr
GERMANY • tbsw.etel@heidenhain.de
GREAT BRITAIN • sales@heidenhain.co.uk
ITALY • etel@etelsa.it
JAPAN • sales@heidenhain.co.jp
KOREA • etelsales@heidenhain.co.kr
SCandinavia • sales@heidenhain.se
SINGAPORE • info@heidenhain.com.sg
SWITZERLAND • verkauf@heidenhain.ch
TAIWAN • info@heidenhain.tw
THE NETHERLANDS • verkoop@heidenhain.nl
OTHER COUNTRIES • internationalsales@etel.ch

REPRESENTATIVES

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