

RECURRING MOTION SYSTEM CHALLENGES

If you are looking for an increased level of performance, QuiET has been designed for you! High-end applications deal with tighter and tighter requirements in terms of position stability, vertical jitter, move and settle times, and tracking error.

Thanks to a proprietary low-noise sensor and an homogeneous, fully digital, and deterministic motion control architecture based on 1 Gb TransnET, ETEL reduces move and settle times to unprecedented values.

With an acceleration feedforward accuracy reaching higher than 99%, less than 1% of the energy generated by a motion stage movement remains at the granite level! The mass of the granite on the active isolation system can therefore be kept small, which in turn reduces the overall real estate and mass, while processing tools directly benefit from a quieter environment.

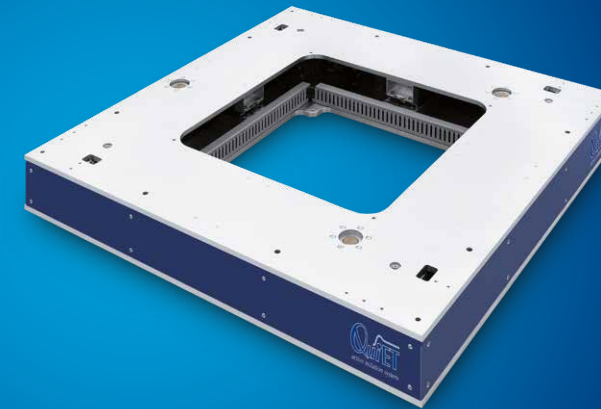


**ETEL S.A.**

Zone Industrielle  
2112 Môtiers  
Switzerland

T +41 32 862 01 00

etel@etel.ch · www.etel.ch



Active Isolation System  
QuiET

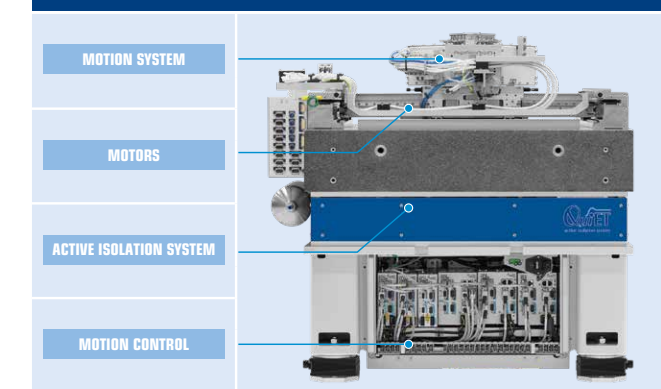
KEEP YOUR MACHINE QUIET!

**QuiET** A new solution for vibration isolation!

The QuiET Active Isolation System is a new active isolation system module cancelling both stage-born and ground-born vibrations along 6 Degrees Of Freedom (DOF), preventing them from perturbing the process taking place on top of your motion platform.

Most of the time, high-end applications in the semiconductor industry integrate complex equipment set-up, which, in one way or another, is connected to the granite of the motion platform. As such, any vibration at the granite level translates into inaccuracies and longer settling times at the process tool level. Thanks to ETEL's solution, getting rid of those vibrations has never been done so efficiently!

FORWARD INTEGRATION



## PERFORMANCE

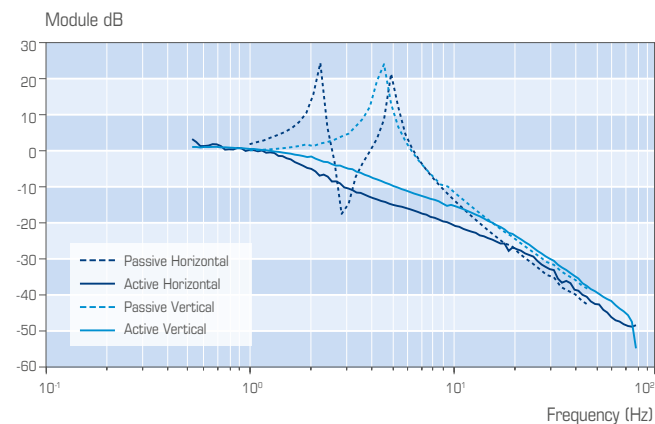
### Pushing motion performance to the next level!

The QuiET Series is pushing one step further ETEL's Forward Integration Strategy. From now on, an advanced motion platform from ETEL does not only include the advanced motion system and its associated state-of-the-art motion controllers, but can also benefit from ETEL's proprietary active isolation module. This makes ETEL the only motion system supplier able to cover such a wide scope of supply!

### Don't know who is responsible for your machine not performing as expected? Willing to optimize your supply chain and R&D resources?

When delivering the QuiET module as part of an advanced motion platform, ETEL becomes your sole contact point for everything related to performance! No need to coordinate between different suppliers, immediate reduction of communication channels, easier servicing and commissioning. So remember, if you want your machine to keep QuiET, ETEL has the solution for you!

### Transmissibility curve



## MODULAR, SCALABLE, SERVICEABLE

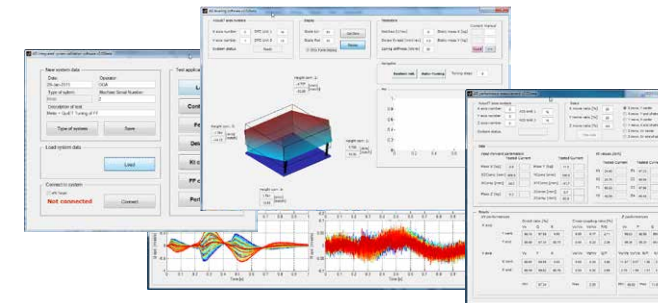
The QuiET Series has been designed to be highly modular and scalable. Thanks to a list of preselected active and passive components, ETEL can very quickly find the optimized solution accommodating your needs! Spring elements, Lorentz actuators and proprietary sensors are embedded within a sandwich-based architecture that is then customized to fulfill any system requirements and makes serviceability easier in the field.

The controllers of the QuiET module and those of the motion platform are all standard AccurET controllers and can be located in the same rack or electrical cabinet.

## COMMISSIONING TOOL

A user friendly graphical interface is available. It is compliant with any type of stage configuration and includes:

- Automatic tuning of the feedforward parameters
- Identification of the system
- Built-in leveling capabilities



## APPLICATION EXAMPLES

### XYZTT PLATFORM

- Travels: X420 x Y490 mm
- Moving mass: 16 kg
- Overall mass: 515 kg
- Acceleration: 3 g
- Footprint: 720 mm x 950 mm
- Jitter 3 sigma: XY: 2 nm / Z: 2 nm
- Move and settle time: 25 mm ±50 nm in 100 ms



### XYT PLATFORM

- Travels: X365 x Y355 mm
- Moving mass: 12 kg
- Overall mass: 525 kg
- Acceleration: 0.6 g
- Footprint: 970 mm x 670 mm
- Jitter 3 sigma: XY: 2 nm / Z: 2 nm
- Move and settle time: 20 mm ±100 nm in 170 ms



### XYZT PLATFORM

- Travels: X320 x Y320 mm
- Moving mass: 15 kg
- Overall mass: 780 kg
- Acceleration: 0.8 g
- Footprint: 745 mm x 770 mm
- Jitter 3 sigma: XY: 30 nm / Z: 20 nm
- Move and settle time: 20 mm ±100 nm in 200 ms

