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## Rotary Axis

DXR<sup>H</sup>

# **ETEL**

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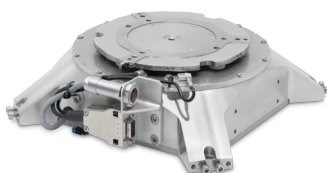
# **ETEL**

## DXR<sup>H</sup> ROTARY AXIS

### DXR<sup>H</sup>

The DXR<sup>H</sup> is the newest addition to ETEL rotary axes solutions. This is a 1 DOF mechanical bearing based rotary axis providing outstanding performance in terms of accuracy and precision.

Featuring a 360'000 lines encoder and unmatched mechanical characteristics directly comparable with air bearing solution without the associated complexity, the DXR<sup>H</sup> is served at its heart by HEIDENHAIN best in class ROP 8080 and ETEL direct drive technology toothless motor without any torque ripple.



Fully compatible with standard ETEL interfaces, the DXR<sup>H</sup> module is available as a standalone module or integrated on ETEL system's portfolio. It also provides a performance upgrade path for all DXR<sup>+</sup> based applications without any redesign as the interfaces are identical.

The DXR<sup>H</sup> rotary module can be integrated to the CHARON2 and the VULCANO2 stacked platforms. It brings high stiffness, high precision, high accuracy, high cleanliness level as well as low thermally induced deformation thanks to its stainless steel design.

With focus on easing semiconductor applications, the module remains a match to all diverse markets and needs requiring solutions for high precision and high accuracy rotation.

The DXR<sup>H</sup> is another perfect example of ETEL vertical integration, based on proprietary IP for motors, electronics and controlling know-how and synergy with HEIDENHAIN when relating to world-class positioning accuracy feedback.

## MAIN SPECIFICATIONS

	THETA
Position stability at 2kHz	± 2.5 marcsec
Positioning accuracy (without mapping)	± 3 arcsec
Bidirectional repeatability	± 0.25 arcsec
Radial runout	±1 µm
Total axial error	±2 µm

## PRODUCT HIGHLIGHTS

- Infinite Theta rotation
- Payload up to 12.5 kg
- Vacuum feed-through to the interface level
- Vacuum purge for axis cleanliness
- Large hollow shaft of 53 mm
- ISO class 1 clean room compatibility
- Several options available such as modular external hard stop, wooble kit, wafer vacuum, connectors support, etc.

## TYPICAL APPLICATIONS

Suited to diverse applications and industries, the DXR<sup>H</sup> rotary module is especially suitable for Wafer Process Control applications such as Overlay Metrology, Critical Dimension and Thin film Metrology as well as photonics.

Examples of other potential applications include:

- High precision 3D scanning or printing, dicing, scribing, laser processes
- High precision assembly, high precision optical applications such as beam conditioner, prisms, etc.