



Single Axis Air Bearing with High Precision Angular Measurement Unit VAMU-13

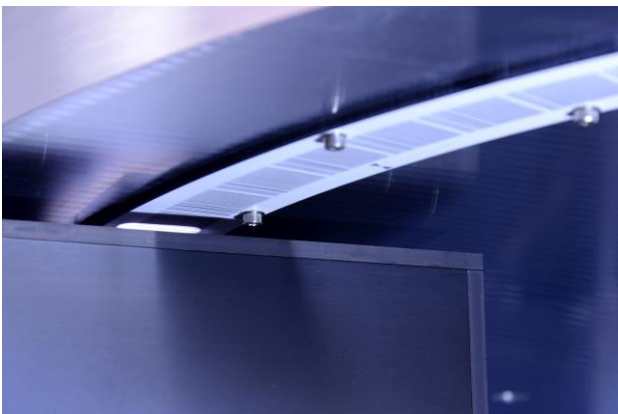


The VAMU-13 is a single axis air bearing combined with a high precision optical angular measurement unit.

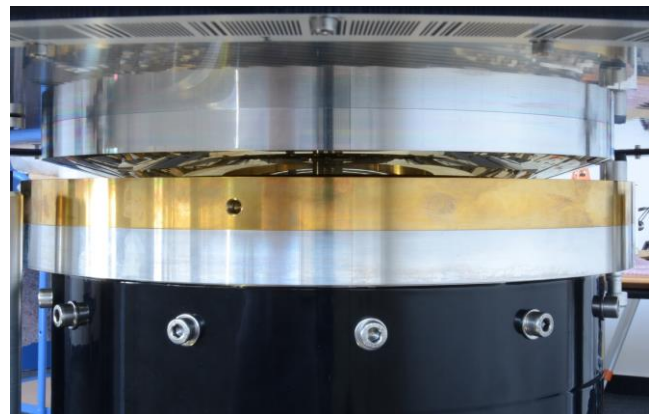
The mechanical structure is made up by a massive pillar that supports the basement of an extremely accurate manufactured air bearing. This base plate contains hundreds of nozzles that are supplied by a continuous air stream. The upper part of the bearing is floating on the air and carries a very stiff and massive aluminium mounting plate for the testing equipment. The loading capacity for this bearing is 300 kg. Other capacities are possible.

The construction is anti-magnetic and can be used in combination with a magnetic field simulator.

VECTRONIC offers this gas bearing with an angular measurement system. Complex filter algorithms convert the raw measurement data into absolute angle and the angular velocity about the axis of rotation. The operator can access these data in real time via the programming interface and process them in its own software.



Measurement unit



Bearing unit

Technical specification

Structural Specifications	
Table diameter	1 m
Height	1 m
Loading capacity	300 kg
Turning capability	$\pm 360^\circ$
Max air disturbance torque	$< 5 \cdot 10^{-4}$ Nm

Measurement specifications	
Angular measurement accuracy	< 5 arcsec
Angular velocity measurement accuracy	$< 5 \cdot 10^{-3}$ °/sec
Max rotation rate	6 rpm
Update rate	500 Hz