

Air Bearing Lathe Platform



Two Axis Lathe

Features:

- Clean, compact and ergonomic machine design
- Fully constrained box-way linear air bearing stacked X-Y stages with dc servo linear motors and high resolution non-contact encoders
- Bellows covers and chip collection to protect linear ways
- Multi-position T-slotted tool holding platform
- Model SP125 high-speed air bearing spindle with center mount, balanced to the highest G0.4 specifications
- Bi-level inspection grade black granite surface plate suspended on vibration isolation air bags
- Customized Delta Tau controller and electrical control cabinet
- Made in the U.S.A.

ABTech was contracted to design and manufacture this turn-key air bearing based two-axis lathe for a leading US automotive parts manufacturer.

Having previously developed other metrology systems for this customer, **ABTech** was challenged with applying our ultra-precision motion expertise towards a machining platform with repeatable accuracy and high through-put.

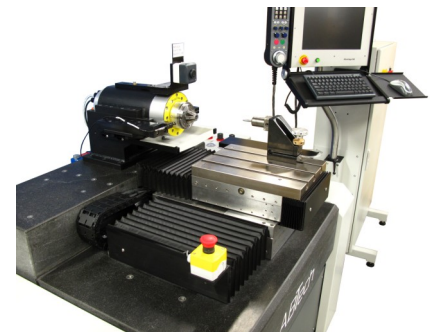
The end result has enabled the customer to provide finished product to the market to tolerances that previously were unattainable. The parts produced on this machine are more accurate than the OEM parts which results in increased performance and longevity.

The initial prototype lathe was delivered and installed at the customer's facility by **ABTech** technicians and began producing shippable parts the same day!

The lathe consists of **ABTech** manufactured air bearings with direct drive motors and high resolution noncontact encoders, including:

- Linear air bearing X-Y stacked stage unit made of hardened stainless steel with a top mounted T-slot tool holder
- SP125 high speed air bearing spindle with custom quick release chuck for part holding

With a modular design approach and complete engineering support capabilities **ABTech** can also respond quickly to your unique prototype or O.E.M. ultra-precision motion requirement.



Close up view including Delta Tau Controller