



PRESS RELEASE

MEDIA CONTACT: *Kimberly Bedard*
kbedard@airex.com

Airex Corporation Announces Latest Patent Award.

*Somersworth, NH- April 20, 2007-*Airex Corporation is pleased to announce the latest patent award from the US Patent Office for a Magnetic Bearing using Displacement Winding Techniques.

The award covers a magnetic bearing system that uses displaced winding techniques to provide rotational torque and radial levitation simultaneously. More particularly, the patent describes a permanent magnet Brushless Direct Current (BLDC) motor capable of producing controllable, simultaneous, rotational torque and directional force via a displaced winding arrangement. This innovative technology applies Airex automated winding techniques to a wide range of applications requiring highly accurate pointing or positioning.

"This Magnetic Bearing design leverages the Airex heritage in automated winding techniques to produce a new class of ultra high performance bearing technology," said President Jim Sedgewick.

This Patent describes a toothless permanent magnet motor, comprised of a permanent magnet rotor and a trapezoidal stator winding containing at least two-phase windings, where each phase is constructed of at least two circuits. The individual circuits of a phase are displaced away from each other along an axial plane that is at right angles to the direction of the alternating polarity magnet array. The two circuits share the same "winding slot", and each circuit resembles a complete phase winding, however, each circuit contains half the total number of turns of the phase. Controllable axial bearing force is developed through the differential balance

of the currents in the circuits, while required motor torque is generated by the sum of the individual currents in a given phase. The relative motion in the rotor also produces Back EMF which can provide positional information in the direction parallel to the magnet array via the sum of the voltages in a phase or in the direction normal to the magnet array via the difference in circuit voltages.

Chief Engineer and inventor Dave Carol advised "applications include wafer handling, contact-less material transporting, in-vacuum positioning system, levitating metrology, tool positioning, optics positioning, vibration isolation and space- based platforms."

For additional details on the patent contact Airex Corporation directly or visit our website.

###

ABOUT AIREX CORPORATION

Airex Corporation has been a cutting edge provider to the motion control industry since 1950. The company is an ISO 9001 Engineering firm with business units specializing in the design and manufacture of linear motors and electromagnetic components for military and high performance commercial applications. Airex products are distinguished by automated winding techniques performed on custom winding machines. This distinctive capability assures exact positioning of conductors and precise unit-to-unit uniformity while improving performance in the resulting product. Airex is recognized by international design authorities as an expert in electromagnetic design of specialty coils and motors to meet a wide range of motion applications. Airex has been meeting diverse needs for international customers in aerospace and defense, semiconductor, electronic manufacturing and testing, optical/laser positioning, material handling, printing and other industries requiring high precision solutions. The company continues to develop the technology base with practiced engineers in a state-of-the-art facility to meet the ever-changing needs of customers and the markets they serve.

For sales email us sales@airex.com or contact Jim Sedgewick by phone (603) 841-2040

For more information on Airex Corporation visit us at: <http://www.airex.com>