In partnership with

What are the benefits of Electric Linear Actuators compared with Pneumatic Systems?

● Air Systems always have **LEAKS** which costs money because the compressor is still running to produce air which is wasted.
● Air Systems use air even when motion is not required, electric only use energy when it is needed hence **EFFICIENT** up to **90% savings**.
● Air-lines / seals wear & split due to contamination & age so need constant MAINTENANCE/ replacement. Often many km of hoses!
● It is not possible to get **REPEATABLE** constant air pressure, since cylinders are always switching on and off around the factory running on the same compressor, electric cylinders always give the same result e.g. In food / sealing application for example this is critical.
● Although the initial cost of Electric Actuator is more than Pneumatic (maybe 3-5 times more), the extra capital cost is usually paid back WITHIN 12 months (NOT including air leaks - see US Report below), **reduces carbon** and no purchase of compressor is needed.
● Electric linear motion is a **CLEAN** technology, hence is preferred in many industries e.g. Food, Water, Medical, Pharma Industries.
● Air systems are very difficult to control in terms of **positioning** and levels of force due to seal stiction and over shoot. Air is not solid.
● Health and safety directive states machines should operate below 85dbA@1m, electric systems are much **quieter** than air systems.
● Large End Users are moving away from costly pneumatic systems to **REDUCE ENERGY**, save carbon and greenhouse gases. Reduced Insurance + **no compressors to audit / maintain**. No capital cost, Carbon Friendly. Electric only uses energy when moving applying force / load.
● ASK your OEM's to give the end users the CHOICE of all Electric vs. an inefficient Air system.
● Based on a University of Pittsburgh study in 2003, for a continuous duty welding application, the energy cost to operate a servo electric actuator **was 1/10 the cost** of using air to power the required pneumatic cylinder to power the same actuator. £470 vs. £ 4,700 per year without any air leaks!! This 10:1 ratio is well know in Valve / Process Control industry.
● **Improved Cycle Rates** – speeds of up to 2m/s are available and accel rates of 25g = 50ms to max speed – means up to 5Hz oscillation.
● **Accountability –** it is possible to accurately measure + datalog the applied current and position during the cycle, hence applied force / dosage, it is possible to create an accurate history log of this information and give assurance / evidence that the sealing force / dosage was applied as demanded.
● **Reduced Waste** - Cost of miss-sealing / incorrect dosage based duty can be high cost. Less miss-sealing = better quality, better accuracy equals less waste.