



TRD Special Slide with Rod Lock Reduces Overall Positioning System Costs by 20%

Challenge:

A military armaments contractor needed a pneumatic positioning system that would work in a potentially explosive environment. They specifically required a large moveable work surface that could be repositioned in less than 1 second in 1" increments. The operation required the force of a 1.5" bore cylinder with positive position locking/holding to resist the manufacturing process forces.

Solution:

TRD designed a low friction cylinder/slide assembly with integral cylinder rod lock to meet the specific space envelope. The customer provided a bolt-on external, explosion proof linear transducer for position feedback to the Bimba PCS closed-loop pneumatic position control system.

The slide assembly was mounted vertically using the (4) bottom tapped holes on the special rectangular cylinder head and cap. The pneumatically controlled position system would repeatedly reposition the customer's 20 pound payload to within 0.008 thousandths of an inch throughout the 4 inch stroke range. The customer reduced their overall positioning system costs by 20%. This special design has also been used in non-military, non-explosion proof applications to reduce overall positioning system costs.



Benefits:

- Reduces overall positioning system costs by 20%.
- Can be repositioned in less than 1 second in 1" increments.
- Explosion proof linear transducer for position feedback.

Other Applications:

- Screen Printing Systems for the Semiconductor Industry
- Parts Feeder
- Drilling and Tapping