



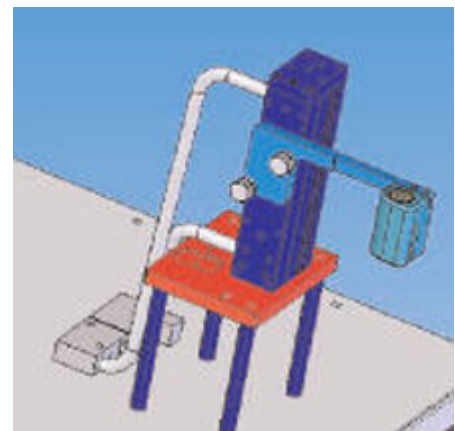
## Lab Cylinder Offers Precision in Compact Design

### Challenge:

A manufacturer of biological and medical laboratory test equipment has historically used a small Bimba Flat Square II cylinder in their compact analyzer for clinical diagnostics. The cylinder moves a needle vertically to prepare samples on a small plate that is about the size of an index card, and holds approximately 100 samples. After one sample cycle is complete, the plate indexes to the next location until all samples are prepared. When the testing needed to increase the number of samples to over 300 with the same size plate, greater precision in a smaller foot print was needed.

### Solution:

To accomplish this challenge, a Narrow Profile Actuator (NPA) was used. Mounted vertically and under current load conditions, the NPA cylinder table would not vary more than 0.001" per inch of stroke, from rest to extended position. In addition, the mounting characteristics of the cylinder simplified the existing design by reducing the number of components, saving the customer additional money.



### Benefits:

- **Compact, narrow profile.**
- **Single bearing block provides precise load guiding for stroke lengths up to 120mm.**
- **Double bearing block optional for better stability and higher loads.**
- **Eliminates end play.**

### Other Applications:

- **Liquid Dispensing**
- **Pick and Place**
- **Product Handling and Positioning**