Pick and Place with Accuracy and Speed

**Challenge**
A high duty and high speed pick and place application required a system that was simple in design, easy to mount, and provided trouble free motion.

**Application Description**
The entire system is picking and placing pistons for pumps. The system moves up and down (vertically) twice and also forward and backward (horizontally) for a total of 7 meters within a 7 second time period. This cycle is repeated 500 times for one setting and operates 24 hours per day. The loads are relatively light, with the Z axis specifically carrying 10kg.

**Solution**
The Hepco Driven Linear System (DLS) combined with the Heavy Duty Compact Beam was the perfect choice for this demanding system. The X axis 7 meter travel is comprised of two DLS4 units running in parallel which are linked with a drive shaft and is servo motor driven.

The 2 meter Y axis motion is again achieved by the use of a DLS. However, running parallel is an outboard support unit that provides sufficient rigidity and accuracy to ensure the components are located accurately.

The Heavy Duty Compact Beam (HDCB) is utilized in the Z axis 1 meter stroke. It is rack driven with slides on all four edges which also provides accurate no-play movement.

**Products Used**
- HepcoMotion DLS4, belt driven
- HepcoMotion HDCB - Z Axis

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