

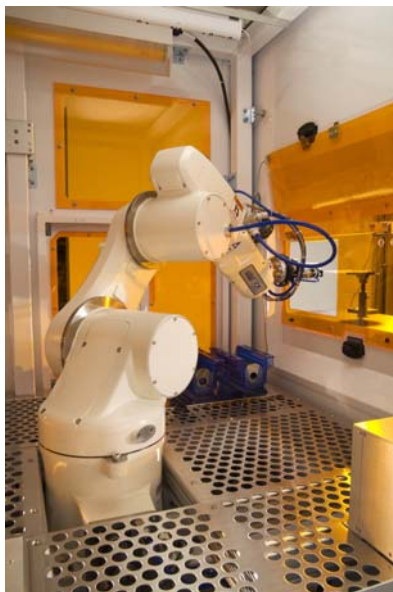


HARD DISK INDUSTRY

HARD DISK DRIVE MEDIA LOAD MODULE

■ The Situation

As the demand for higher capacity hard disk drives (HDD) continues unabated, it is critical that HDD manufacturers introduce new technology that will allow them to scale the HDD media's areal density. Our client had perfected such a technology, but it was for semiconductor wafers. To meet the HDD industry's needs it must be adapted to the factory requirements of disk media.



Six Axis Robot Provides Robust Cassette and Media Handling

■ The Challenge

The requirements for manufacturing HDD media are quite different from manufacturing semiconductor wafers. Throughput is typically 10 times greater, form factors are different and the media is handled entirely differently. In addition, the factory automation is customized for each major manufacturer. Meeting all of these new requirements simultaneously and on the aggressive schedule demanded by the HDD manufacturer is extremely difficult.

■ The Solution

Owens Design worked collaboratively with our client to identify those elements critical to their process and how it could be adapted to the unique automation needs of the HDD industry. Owens Design then developed a disk handling module that interfaced our customer's tool with the HDD manufacturer's factory. This module utilized a six axis

standard robot with custom end effectors, cassette handling, and clean air flow. Owens Design developed the entire module including the robot programming. The result for our client was a rapid introduction into a new market that has proven very successful.



Disk Loading Module