



HARD DISK INDUSTRY

DVD SPIN COAT PROCESS AUTOMATION

■ The Situation

A leading manufacturer of DVD mastering equipment needed to have an automated system that would be able to feed cleaned, coated and cured glass disks into their mastering system. The current method involved operators who moved individual glass disks from a washing station to a separate chemical dispense and spin coater and finally to a bake and cure station. This was a very manual process that took up a lot of floor space and supplied coated disks of varying and unpredictable quality levels to their flagship mastering system. Not wanting to diverge from their core technology and dilute engineering resources, this was a perfect outsource project for both the client and Owens Design.

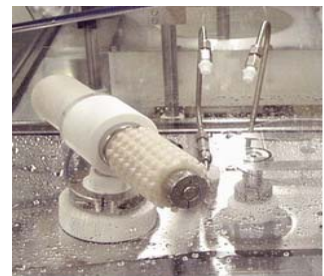


■ The Challenge

Complex process requirements. New system needed in five months for major tradeshow.

■ The Solution

A front-end cassette handling system with a custom glass disk handling robot was designed to have one-button start and full walk-away automation. The operator now places two cassettes of 20 glass disks into the load stations and presses a button. A few hours later all the disks



have been loaded into and processed through separate chambers to achieve the wet cleaning, spin coating of the customer's proprietary chemistry and finally into one of four bake stations. After that, the disks are placed into one of two output cassettes and ready for the mastering process. The whole system now takes up less than one-fourth of the floor space, can operate in an office environment (non clean room) because it has a built in HEPA air system, and under recipe control will produce disk after disk with the same high quality standards. Industrial design was added to give the system a similar look and feel as the partner mastering system.