

Cool Stuff in a Hot Cell.

Hatch Technology

Through Applied Robotics Inc. Channel Partner, Gibson Engineering and through one of their customers, Hatch Technology comes this unusual application. Gibson Engineering is an Automation Solution Provider serving the six New England states with regionally located Sales Engineers and a Technical Support Team. They represent a small group of World Class Manufacturers of Industrial Automation products, including Applied Robotics. Hatch Technology is a leading provider of automated equipment, controls, and software systems. Hatch has been providing custom automated systems and controls to customers since 1998 and has installed over 500 systems in factories and laboratories around the globe. One of those systems involves radioactive materials and the Applied Robotics' QuickSTOP.

The process automated by Hatch involves filling, stoppering and sealing small vials of an injectable radioactive material used in the treatment of cancer. Due to the radioactivity, there is a zero tolerance for accidents or spills of any kind. The robot performs all of these process steps, and then places the sealed vials into a rack which is then taken for autoclaving or sterilization. The system was built in a radioactive "hot cell," which is a lead enclosure 12' x 4' x 4'. Due to the radioactivity, no human can go into the cell and everything in the cell is covered in a 3/16th lead covering for protection as radioactivity deteriorates electronics on a micro-level causing premature failures. Should there be a spill or accident of any kind, production would be stopped for several days, maybe even a week or more as the radiation in the cell would need to 'cool down' before a bio hazard team could enter to begin cleaning up the actual spill following all NRC protocols. Besides the obvious danger and health risks, the application would suffer massive down time and production of this crucial medical product would stop. The medical company would lose productivity, time, and of course, money. All intolerable events for any company.

To insure that there are no spills and no loss of productivity, time and money, Gibson and Hatch incorporated the Applied Robotics' QuickSTOP into their automation solution. Applied Robotics' QuickSTOP is a dynamically variable collision sensor that operates on an air pressure system. A regulated air supply provides positive, variable pressure to hold the collision sensor rigid during normal operation. At impact, the air chamber seal is opened, immediately signaling the system controller to stop. With dynamically variable trip points and

permanent repeatability, the QuickSTOP is uniquely designed to help protect a company's investment in automation equipment and resources. By adjusting the air pressure, Hatch is able to guarantee no spills and no downtime. The QuickSTOP insures that the system will stop if there is a misalignment or some other issue before a spill can occur. The system can easily be reset in moments and the process continued. The QuickSTOP gives Hatch the piece of mind and confidence to tell their customer there will be no accidents.

