



## PHARMACEUTICAL PACKAGING PLANT

### CHALLENGE

Under construction, this high-tech plant was being designed to produce high-precision plastic parts in a cleanroom environment for the pharmaceutical industry and other sophisticated applications.

The plant design engineer had become an expert on the door needs of his company. He had laid out the production and material handling flow for over a dozen plants located in the United States, as well as the Far East.

His plan called for fabric roll-up doors to open at several locations into a corridor around the cleanroom production area and from the shipping/receiving area.

“It is crucial that we isolate the production area. For this new midwest location, we wanted a highly filtered air system, with a positive pressure at .05” of water to create a class 100,000 cleanroom.”

Most of the molding was to occur in highly automated, manufacturing cells. For example, one cell was to mold ultra-critical medical curvettes in optical grade acrylic, using a dedicated electronic leak detector.

A servorobot removes the curvettes, 32 at a time from the mold and precisely places them in the tester . . . where a 12,000v dc spark charges through the curvettes, ensuring there are no cracks.



### FABRIC DOOR SOLUTIONS FOR CONTROLLED ENVIRONMENTS AND WEATHER RESISTANCE

Even microscopic particles could threaten the reliability of these products.

“It’s all very high-tech, but it’s also high speed, with personnel going in and out of the cleanroom many times an hour.”

This company looks for partnerships with Fortune 500 companies with contracts providing a million dollars worth of business within a two year period. To deliver for these major clients, they seek low system cost - not just low-piece price. This means shaving throughput time across the board for seven days a week, on a two shift operation. Any bottlenecks at the doorway can pinch off production. Downtime is out of the question.

Before the construction of the facility, the engineer had specified fabric roll-up doors in other plants. “We wanted speed, but we had to pay a premium in cost. The doors we tried previously were too heavyweight for our application.”



# SOLUTION

The Marathon **Spirit** doors installed in the plant have become an integral part of the production system in this 66,000 sq. ft. manufacturing and warehousing facility.

“Throughout the plant the **Spirit** doors close off sensitive areas when the need to be closed off and dependably open up, when traffic rushes through.”

The **Spirit** doors do everything the other models do - at half the cost - and in some cases better.”



Once manufacturing personnel are on the job in the cleanroom area, they are confined to that space. A corridor runs around the perimeter of the production area. Access to the cleanroom production area is through pairs of **Spirit** doors at various points.

Raw material going into production and finished goods coming out are staged in the corridor. Each pair of **Spirit** doors is electrically interlocked. As traffic approaches one of the doors, that door opens, while the second door remains closed. Once the first door closes, the second door can be accessed.

“Using this system, we can maintain the high air purity standards within the production area without using more expensive heavy-duty fabric doors.” For true cleanroom convenience, the durable PVC impregnated woven panel wipes easily clean.

“Further, there are other features of the door we like.” For safety, the doors have a clear vision panel. While the **Spirit** door is fast and lightweight, it also reduces the possibility of injury should the door close, while the doorway is occupied. An instant eversing edge on the bottom of the door, along with photo eyes built into the door frames, virtually eliminates possible door accidents.

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Another benefit is the easy-to-reset breakaway feature of the door. “It is rare that someone will drive through one of these doors, but if they do, the door can be snapped back in place in seconds. This feature eliminates the downtime that could otherwise cripple our operation.”

To further insure the quality control in the production area, the **Spirit** doors are also located on the doorways leading from the shipping/receiving areas.

“We are pleased the **Spirit** doors are able to keep up with our traffic and our needs.”

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