

Injection Molding Machine HPM Hemscheidt



At a Glance

- **Project:** Next Wave™ Injection Molding Machine
- **Company:** HPM Hemscheidt
- **Location:** Schwerin, Germany
- **Solution:** RMC101 motion controller was selected because of its ability to seamlessly transition from position to pressure.
- **Challenge:** Control four vital functions within the same controller.
- **Benefits:** Other controllers monitor operation, decrease service time.

Summary:

HPM Hemscheidt, the second largest manufacturer of plastic injection molding machinery in the United States, has produced the Next Wave™ family of hydro-mechanical molding machines. The Next Wave system features high-speed clamp velocities, rapid tonnage buildup, flexible stroke and daylight specs, and small floor space requirements.

Challenge:

To offer their customers an increase in precision and maintainability, HPM Hemscheidt wanted to overhaul the control system components to the newest-generation technologies. As part of this, they needed a motion controller to control the injection speed, holding pressure, back pressure, screw speed, and mold motion, preferably within the same controller. Also, they needed the motion controller to “talk” to a Siemens S7 programmable logic controller (PLC) over PROFIBUS.

Solution:

The RMC101 motion controller from Delta Computer Systems was selected as it perfectly fit HPM’s requirements. Because the controller can seamlessly transition from position to pressure control, it was able to control all the previously mentioned parts using series of “steps” in the RMC101’s powerful Event Step Editor. Over PROFIBUS, the Siemens S7 can write sequences of motion commands into the RMC101 using a register mapping procedure, which is as simple as loading numbers into a spreadsheet table.

Benefits:

Delta’s RMC also supports the ability to allow other computers or controllers to monitor its operation. This way, the HMI can generate system diagnostic information, such as graphical displays of actual versus target motion profiles, which can decrease service times and allows the machine to be quickly serviced by maintenance personnel.

“Using PROFIBUS, the PLC can write long sequences of motion commands directly to the RMC.”