DELTA
COMPUTER SYSTEMS
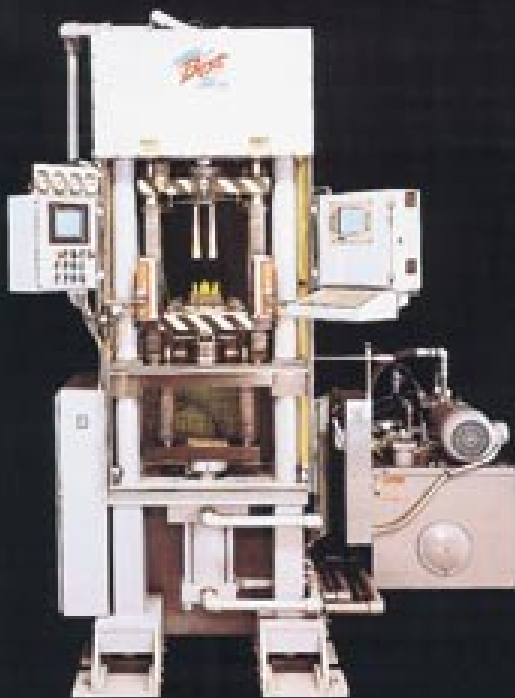### Motion Control

Application Note

Powder-Compacting Press

Best Press Corp.

At a Glance

- **Project:** New generation powder-compacting press
- **Company:** Best Press Corporation
- **Location:** Castle Hayne, North Carolina
- **Challenge:** Quick easy configuration.
- **Solution:** The RMC100 Series due to its high resolution position/pressure control.
- **Benefits:** Comparing actual and desired motion, easily reconfigurable.

Summary:

New hydraulic presses can produce complex parts better and less expensively than even the best mechanical presses. One such machine is a new generation powder-compacting press from Best Press Corporation. The press is capable of forming complex-shaped molded parts with uniform density throughout a varying cross-section and can handle a range of different powder materials.

Challenge:

A major factor in the new system design was the need to ensure that the hardware be easy and quick to configure to support different types of powder stock. In addition, the ability to control 6 axes of position-pressure control was required at the heart of the control system.

Solution:

The Delta RMC101 motion controller was chosen due to its high-resolution position/pressure control, fast loop times and ease of programming/monitoring. Each RMC101 is capable of controlling up to four axes of motion based on inputs of both pressure and position sensors. The RMC controller is a standalone module containing a PROFIBUS interface, a CPU, and 16-bit analog input and position transducer interfaces.

Benefits:

The RMC101 provides the added advantage of allowing a supportive PC to interrogate its internal function table and sensor inputs, for the purpose of comparing actual and desired motion results. Also, because the motion sequence information is software programmed, it is easy to reconfigure the press to produce different manufactured parts or to use different powder materials.

Now manufacturing different parts is simply a matter of slightly reconfiguring the software.

Motion Control . . . and More.
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