

### Examples of Industries Served

- Centrifuge Manufacturers
- Pellet Mill Manufacturers
- Heavy Machine Manufacturers
- Irrigation Equipment Manufacturers
- Tool and Die Manufacturers
- Food Service Companies
- Medical Equipment Manufacturers
- Medical Researchers



# Case Study

### Opportunity:

A customer needed a large multiple pump hydraulic system that was capable of running two separate production floors. Running on the power unit from each floor were hydraulic conveyors, hydraulic dumpers, and other associated hydraulic equipment. Throughout the day, the hydraulic power demand varied depending on the equipment running. The customer hoped to save on energy by only running the necessary hydraulic pumps rather than running the full system flow non-stop. Controlled Motion Dynamics was contacted to design an energy saving solution.

### Solution:

To meet the customer's needs, Controlled Motion Dynamics created a control panel utilizing soft starters, PLC, and HMI for the 12 hydraulic pumps in the system.



- The control system tracks the flow demand of each production floor and determines how many pumps are needed to provide adequate flow to match demand.
- As the flow increases additional pumps are started and as the flow decreases unneeded pumps are shutdown.
- The operator can adjust the control settings as well as manually run the pumps from the 15-inch touch screen HMI.
- The HMI also shows the number of hours each pump has run, status of system filters, alarm status and flow trends.

The customer is now experiencing significant energy savings through the installation of the Controlled Motion Dynamics designed control system.



Photos (clockwise from top left):  
Flow meter, inside of control  
panel, right side pumps, soft  
starter panel, left side pumps