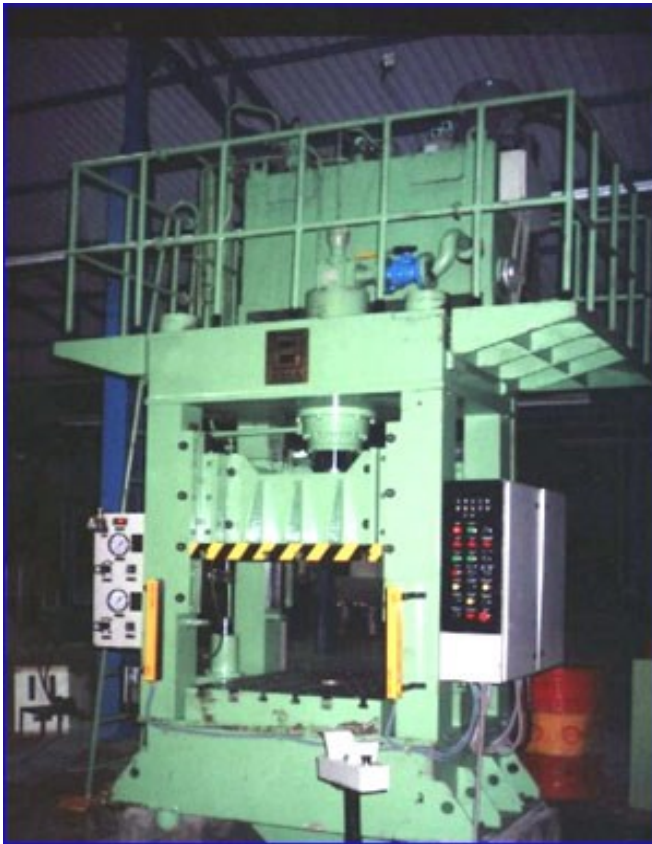


**Customer:** OEM's Under NDA

Machine Capacity: 100T, 125T, 200T, 400T, 500T, 800T

Position control accuracy: 0.005 mm

Pressure control accuracy: +/-1 Bar



Modern Industry is looking for flexible solutions that will be able to provide some new characteristics of hydraulic systems, such as the ability of control motion, the possibility for continuous control of the required values, simple data transfer and signal processing, the possibility of monitoring and process visualization etc. Modern Hydraulic systems have evolved towards electronics and microprocessor controlled electrohydraulic components in order to achieve new control possibilities. Due to its complexity almost every advance controller must be implemented on a digital computer. Such control systems that have electrically actuated valves can respond to the complex demands posed by today's technology.

**Presses** are one of the most commonly used machine tool in industry for the forming of different materials. In the past, for the pressing tasks mechanical presses were more frequently used, but nowadays hydraulic presses take precedence due to their numerous advantages such as:

- ◆ full force through the stroke.
- ◆ Moving parts that operate with good lubrication,
- ◆ Force that can be fully adjustable, which contributes to the flexibility of application,
- ◆ Safety features that can be programmed and incorporated into the control algorithms
- ◆ Can be made for very large force capacities.

On the other hand, hydraulic presses are generally slower than mechanical presses. However, this disadvantage is being overcome with the development of new valves with higher flow capacities, smaller response times and improved control capabilities. In these kind of applications, the ability of force control systems to follow-up varying reference signals is often required for the proper operation of the technological process. In addition, the task of the position control of the hydraulic actuator is also very important. Therefore, a new quality and significant improvement in the functioning of the press can be obtained with simultaneous realization of position feedback, which is actually a hybrid control algorithm. The hybrid Position/Force algorithm allows the position and force control task, allowing the different dynamics of each be adjusted.

The **RMC70/RMC150E** controllers from Delta Computer systems, is one of the popular motion controllers used world wide for such applications where precise motion and ability to control the actuator in dual loop control mode (Position-Pressure/Force or velocity-pressure/Force) is needed. The addition of RMC70/150E motion controller to precisely control the position-force has several advantages.

