

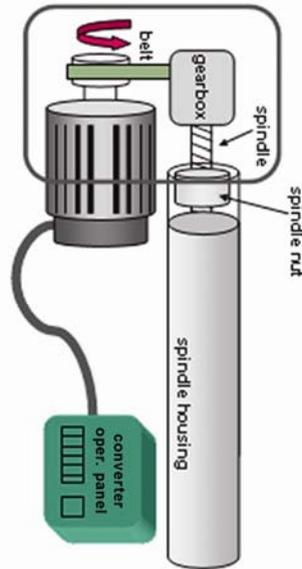
## How to Select the Right Electro-Mechanical (Servo) Assembly Press

Over the years, press assembly technology has evolved from simple hand-operated presses, which rely on the operator for control, to electro-mechanical presses, which internally control nearly every aspect of the pressing operation. With the advent of the electro-mechanical press (commonly referred to as a servo-press), the level of press control is now virtually unlimited.

Electro-mechanical presses can be grouped into three main categories. They range from a basic servo-actuator, used to generate force, to a highly intelligent servo-press system, which provides force/distance feedback and closed-loop force control. To select the best electro-mechanical press for your assembly operation, you need to understand the important differences between the various press categories. Then, by comparing the differences in mechanical design and how the system controls and monitors both position and force during the pressing cycle against your specific needs, you will be able to select the right system.

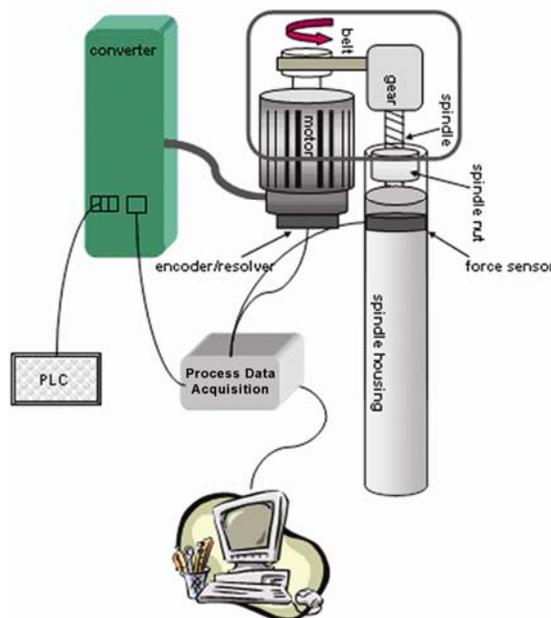
### Basic Servo-Actuator:

Consisting of a motor and spindle, a basic servo-actuator is generally used to shuttle parts between locations. If properly adapted for pressing, a servo-actuator can be used for uncomplicated pressing operations. Typically, a servo-actuator offers the user the flexibility to control both the ram position and the ram speed while providing closed-loop position control. A servo-actuator can measure force via the torque of the motor or an externally mounted load cell, but it will not provide true closed-loop force control. Available control packages vary by supplier, system builder and required configuration.



### High-End Servo-Actuator:

When designed to function as presses, high-end servo-actuators employ several additional mechanical components including planetary roller screw spindles for higher forces, mechanical clutches, integrated load cells and guided anti-rotational rams. Although software packages, which control and monitor the pressing operation, are available, they do not provide true closed-loop force control. Depending on the supplier or builder of the system and required configuration, the unit's software program will vary greatly in both the degree of press control and the level of monitoring.



## Servo-Press Systems

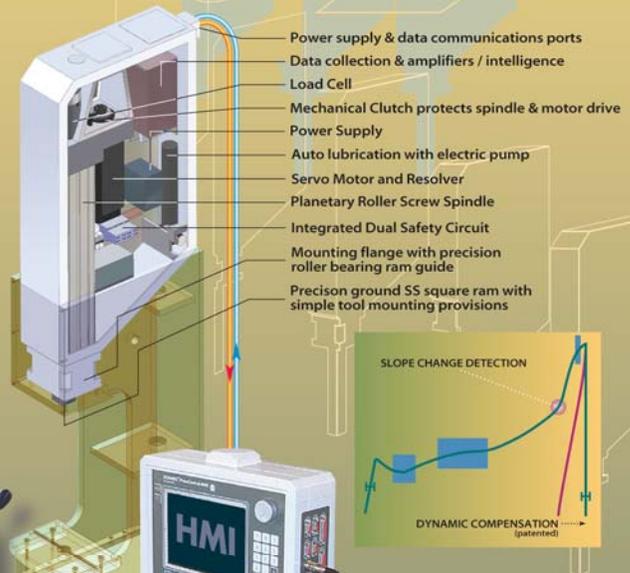
Incorporating all the features of a high-end servo-actuator, a servo-press system contains many additional components that significantly increase the users ability to produce high quality parts. To achieve unsurpassed precision, a servo-press system utilizes totally integrated controls, designed specifically for pressing applications, to monitor the total pressing operation. By incorporating these controls with high-speed data transmission for real-time processing, a servo-press system provides true closed-loop force control and can dynamically compensate for system, tooling and part compression/relaxation.

Designed to operate in an industrial environment, a servo-press system, equipped with an integrated safety circuit, minimizes any electromagnetic interference (EMI) present in the area and incorporates a motor cooling system. To meet the varying needs of users, the manufacturer provides a fully configured control package with standard pressing profiles to accommodate a variety of pressing requirements. As a result of these unique features, the servo-press system is the most accurate and controlled pressing system available today. (For a detailed description of a servo-press system, please see advertisement on this page).

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- Install in any orientation

### Typical Applications



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