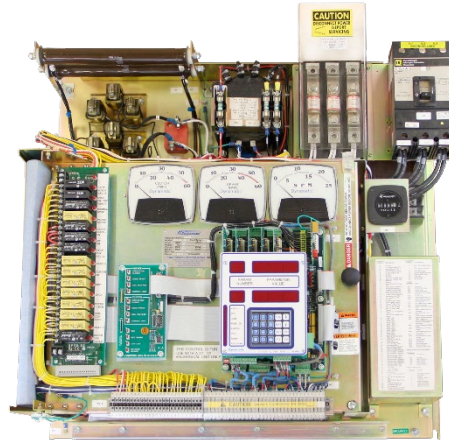


## SPECIALTY PRODUCTS

### Constant Energy System (CES) Press Drive Digital Controller (Legacy)



#### Description

The Constant Energy System (CES) Press Drive Digital Controller is a solid state, closed loop velocity controller designed specifically for use with the Dynamatic eddy-current mechanical press drives. The controller is microprocessor controlled and all components of the controller are contained on a sub-panel except the autotransformer, which is mounted separately, as shown above.

The CES controller is readily adaptable to position control in large production presses. The system utilizes a position transducer (digital shaft encoder) to measure press position (crank angle) and compares this feedback information with a digital position reference.

The CES controller is easily applied to single or multiple action presses where speed control is desirable. The system offers many unique features not available with other press drive designs for use on draw presses, blanking presses, transfer presses and on synchronized presses with automated handling equipment.

The combination of the eddy-current mechanical packaged press drive and the CES digital controller offers a simple, safe, low maintenance and reliable drive system in a wide variety of applications required of the production press equipment.

The CES Press Drive Digital Controller integrates easily in the eddy-current press drive application and offers the systems integrator Keypad Programming, Simple Field Adjustments, LED indicators for monitoring all critical functions, Press Speed Control, Angle Measurements with position resolver option, CES Digital Master Regulator (DMR) Control Panel, All necessary I/O modules and built-in parameter for test, diagnostics and start-up modes.

**SPECIALTY PRODUCTS**

**Constant Energy System (CES) Press Drive Digital Controller Specifications**

Input Voltage	460V, 3 Phase, 60 Hz (Other voltages available)
Output Voltage	700 VDC, 100 Amps, Field Forcing
Communication Port(s)	RS232, Option for RS422/485
115 VAC Input Signals	#1 - N/O - Power Side #2 - N/O - Neutral Side #3 - N/O - Clutch Contactor #4 - N/O - Inch #5 - N/O - Micro Inch #6 - N/O - Reverse #7 - N/O - Control Power #8 - N/C - Stop on Top #9 - N/O - Fault Reset
115 VAC Output Signals	#1 - N/C - Normal Stop #2 - N/C - Stop Main Motor Fault #3 - N/C - Stop Now Fault #4 - N/C - Stop on Top Fault #5 - N/C - Control Failure Fault #6 - N/O - Clutch On Signal
Error Detection	Over-Speed Under-Speed
Power Circuits	Clutch & Brake - AC Line Contactor Clutch & Brake - Over Current Protection
Mutuatrol, (Dynamic Braking)	Solid State Speed Regulation Control
Digital Main Regulator (DMR)	Closed Loop Speed Control with Six (6) individual run speeds & Corresponding press crankshaft Starting angles
Serial Interface	ASCII
Monitoring	Analog Meters Clutch Amps Brake Amps Strokes Per Minute
Dimensions	Controller Sub-Panel 30" H x 31.5" W x 14" D (762 mm x 800 mm x 356 mm)
	Autotransformer 17.5" H x 19.75" W x 13.38" D (445 mm x 502 mm x 340 mm)
Weight	300 lbs nominal
Position Resolver	Optional
Tach Generator	Optional
NEMA 12 Enclosure	Optional
Integration & Start-up Assistance	Optional
Loose Speed Potentiometer	Standard
Loose Analog Meter (SPM)	Standard