

enFORCE APPLICATIONS

AUTOMOTIVE



With the wide range of available press capacities, enFORCE Servo Presses are the perfect solution for numerous automotive assembly and fabrication applications, including but not limited to:

- Bearings
- Freeze plugs
- Wheel studs
- Dowels
- Brake calipers
- Fuel injector insertion

ELECTRONICS



The wide range of speed settings and the ability to press at rated loads for unlimited time make enFORCE Servo Presses suited for a wide range of electronic components for manufacturing and assembly. Including but not limited to :

- IC Chip bonding
- Lenses
- Motor housing clinching
- Keypad blanking
- IC lead forming
- Contact insertion

TESTING



The high force/distance accuracy and the available push-pull functionality allow enFORCE Servo Presses to be used for many testing situations:

- Destructive weld testing
- Fatigue testing
- Spring durability
- Compression testing
- Connector insertion testing
- Material capacity testing



WIDE VARIETY OF USES

Our press systems are fully engineered to meet your specific requirements, whether you're in the automotive, aerospace, off-road equipment, appliance, semi-conductor or any number of other industries.

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CERTIFIED ISO 9001

FEC's ever improving and expanding product line currently offers:



The key to the excellent reputation we've earned with our extended customer base is the expertise of our engineering and manufacturing staff in the design and production of our assembly systems. Additionally, the service-oriented nature of our operation ensures support from initial equipment concept through installation and beyond.



enFORCE

DIGITAL SERVO PRESS



FEC
AUTOMATION SYSTEMS

enFORCE

FULLY DIGITAL ELECTRICAL SERVO PRESS SYSTEM

SIMPLIFIED ALL-IN-ONE CONTROLLER FEATURING DIGITAL SERVO TECHNOLOGY IN A SMALL MODULAR PACKAGE



INTELLIGENT PRESS SYSTEMS FOR A NEW AGE.

COEXISTING WITH PEOPLE & THE ENVIRONMENT

PRESSES

STANDARD FITTING PRESS

These presses generally have a holding time of less than one second. They are suited for applications such as: pressing bearings, gears, shafts and seals; pressing and staking plugs; replacement of typical hydraulic pressing applications, etc.

STANDARD BONDING PRESS

This press should be used in applications requiring a holding time greater than one second. These presses have unlimited hold time and duty cycle restrictions. They are suited for applications such as: circuit board bonding, IC chip molding and bonding, solar panel laminate bonding and other heat bonding applications, etc.

SLIMLINE PRESS

These presses can be used in any fitting type press application or when upgrading a hydraulic or pneumatic system. They are especially suited for applications when narrow center-to-center mounting distances are required such as: Valve guide insertion, valve seat insertion, etc.

MINI PRESS

These presses can be used in small areas where lighter pressing forces are required such as: small parts assembly, circuit board component insertion, pin & socket insertion testing, spring testing, seat belt latch testing, etc.



THE FUTURE OF PRESSING TECHNOLOGY

The enFORCE's integrated load cell and resolver provide highly accurate closed-loop control of the assembly process. Built-in programmable check zones allow in-process inspection and stop the cycle before out-of-spec parts are produced, reducing scrap. Press methods include pressing to a force, distance, rate increase and decrease, relative distance and more. Programming every aspect of the press' movement throughout the cycle couldn't be simpler with our easy-to-understand picture-based parameter setup screens.

enFORCE USER CONSOLE SOFTWARE

DSP User Console Software is a Windows® based programming interface that enables you to:

- Communicate with, program and monitor up to 31 presses simultaneously
- Read, write, edit and check operational parameters
- Edit operational parameter data on a graphical or spreadsheet screen
- Display, save and print operational result data and load/current curves

1 PRODUCTIVITY

- Wide force and speed range to tackle any pressing application
- "On-the-fly" parameter selection allows multiple models to be run using different target load/distance set points
- In-process inspection of the pressing process to detect abnormalities and stop the cycle
- Controller can store up to 10,000 cycles of pressing data

2 FLEXIBILITY

- Configure as a stand-alone system or add a main unit to provide sequencing capabilities and allow control/communication through virtually any available fieldbus
- Easy-to-use picture-based software allows part setup and data monitoring/collection with very little training
- Every part of the press movement is programmable

3 ACCURACY

- Permanent magnet motor/resolver and built-in high resolution load cell provide accurate control of both force and distance
- Embedded "Smart ID" chip allows automatic calibration and zero level checks to be performed each cycle

4 ENVIRONMENTALLY FRIENDLY

- Low energy consumption
- Reduces energy, noise, heat maintenance and space requirements
- Eliminates the costs associated with the handling, storage, clean up and disposal of potentially hazardous fluids (oil)



enFORCE CONTROLLER

Three controller models cover the full range of press sizes. As a result of miniaturized circuit technology, the compact units maintain a maximum width of 123.5mm (largest model). All 3 controllers are back panel mountable.

Shown with optional Main Unit.