The FlexPress EM-SEM—Series is precisely driven by AC Servo Motor and elaborate ball screw system. The FlexPress cost effective model of AC servo press, is most suitable for press-fit bearing, oil seal etc. with its various functions.
Introduction

The FlexPress EM-SEM–Series is precisely driven by AC servo motor and elaborate ball screw system. The FlexPress cost effective model of AC Serv Press, is most suitable for press-fit bearing, oil seal etc. with its various functions.

Characteristics

High-precision Press-fit system
- Repeatability : ±0.01mm
- Min. Position setting unit : 0.001mm
- Inserting pressure : 10N

Excellent data analysis and processing
- Offers various function to effectively manage force insertion quality
- Supports various search methods
- Displays multiple operation data graphs

Intuitive interface and user convenience
- Simple model setting using patterns
- Supports motion simulation of the model
- Supports multi language (Korean, English, Japanese and Chinese)

Real-time quality management
- Saves up to 100 model data
- Check up to 8 operation results

Optimal customization
- Specialized engineering service with vast experience and innovative technology
- Optimal system incorporating customer requirements

CENTER MASTER (optional specification)
- Automatic centering compensation if Center Master applied
- Reduce Press-fit equipment cost
- Prevent Loose and press-fit errors.
- Capable of managing quality by Center Master.

Various capacity and wide range of model options
- Maximum force : ranging 2kN~100kN (9 models)
- 5 types of strokes ranging from 150 to 350mm, 50mm step (150 to 400mm for 10 - ton model)
- Customized model available for 150, 200, 300 and 500 [kN]

Various load control and judgement condition
- Precision pressure control by setting load, speed and time
- Real-time operations monitoring with 13 judgement type
- Accept / reject option accordance with judgement type

External device control
- Employs digital I/O contact module through Modbus TCP
- Able to control external devices (PLC, etc.) through field bus and Ethernet-IP communication

Overload prevention
- Prevention of AC Servo Press and facilities from overload
- Protection of Press-fit works

Environment friendly product
- Uses electricity – a clean energy
- No hydraulics – clean work environment
- Energy saving
- Low noise level

Energy Consumption
- Pneumatic Cylinder
- Hydraulic Cylinder
Application of FLEXPRESS

Press-fit 
- Bearing, oil seal, bush, pin, shaft, gear and more

Pressurization 
- Cramping, riveting, bonding, caulking, stamping, forming and more

Comparison to Pneumatic and Hydraulic Systems

- No complex operation and control system
- Driven by AC Servo Motor
- Smaller foot print
User Interface

**1:1**
- Touch Panel PC
  - Provides exclusive monitoring program
  - Connects up to 8 drivers
- PLC
  - Provides Control support using electric contact
  - Employs remote I/O module
  - Supports CC-LINK field bus
  - Supports Profinet and Profinet field bus
  - Supports Modbus TCP and Ethernet-IP communication

**1:N**
- Touch Panel PC
- PLC
- Fieldbus
- Ethernet

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Monitoring Program

Intuitive user interface
- Simple model setting using patterns
- Supports motion simulation of the model
- Supports Korean, English, Japanese and Chinese

Exceptional data analysis
- Offers various functions to effectively control insertion quality
- Supports various search methods (Model name, Serial number)
- Displays multiple operation data graphs

Real-time quality management
- Saves up to 100 model data
- Check up to 8 operation results

Monitoring
- Data graphs and decisions

Set Pattern
- Motion set up

Decision-Making
- Judgement

I/O Timing Chart
- I/O contact and T-chart

Sensor Correction
- Sensor Calibration

Press Status
- Press status

I/O Status
- Communicates with external device

Result Search
- Database

Review Result Graph
- Graph review
Judgement Type

13 Judgement types

- Press-fit point
- Force at position
- Pinches

Exclusive monitoring program

Monitoring of each operation

Max. Force

Min. Force

Pass Left to Right

Band Pass

Box Termination

Depth
## Specifications of FLEXPRESS EM·SEM

**EX) SEM - 05015**

**SEM** : Standard type  
**SEM** : High speed type

### Common Specification

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<th>Force [kN]</th>
<th>Model</th>
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<th>Speed [mm/s]</th>
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### Interface

- Hard Disk : SSD 256GB
- CPU : 1.8GHz
- Memory : 4GB
- C&M Program

### Repeatability

- Position ±0.01mm (Under zero load)
- Force Below ±1% of [F.S]

### Additional Information

- Force 2 [kN] : EM-00215
- Force 5 [kN] : EM-00515
- Force 10 [kN] : EM-01015
- Force 15 [kN] : EM-01515

* 70% of Max Thrust is recommended in mass production line
* Recommended payload is 3% of Max Thrust
* Separately consult is needed for product selection
### Dimensions of FLEXPRESS EM

<table>
<thead>
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* Please separately consult for 150-500 [kN] specifications.
* Drawings are available for download at www.cnmrobotics.com.
### Dimensions of FLEXPRESS SEM

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