



# DLS iLS1

Intelligent Link Drive  
Single Point Servo Press



# i Servo Press m o t i o n

## Precision

Increase forming precision by applying servo control system.

## Forming Quality

Servo electronic system upgrades press capacity, increasing forming quality.



## Intelligence

Servo control system and real-time monitoring intelligent program create high-precision stamping technology.



## Added Value

Diversified and broader product range through compound motion curves.

## Productivity

Improved productivity as a consequence of programmable speed in conjunction with versatile motion curves.

## Environment Green

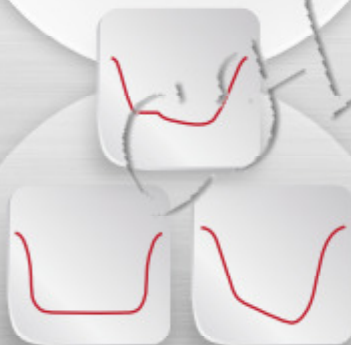
Servo press consumes lower electricity on stand-by mode.

## Availability

Human machine interface make operating more user friendly.

## Diversification

Free slide motion.  
Well-suited for diverse working stations.



## Green Design

Reduce electricity consumption and noise at idle running, prolonging die life.

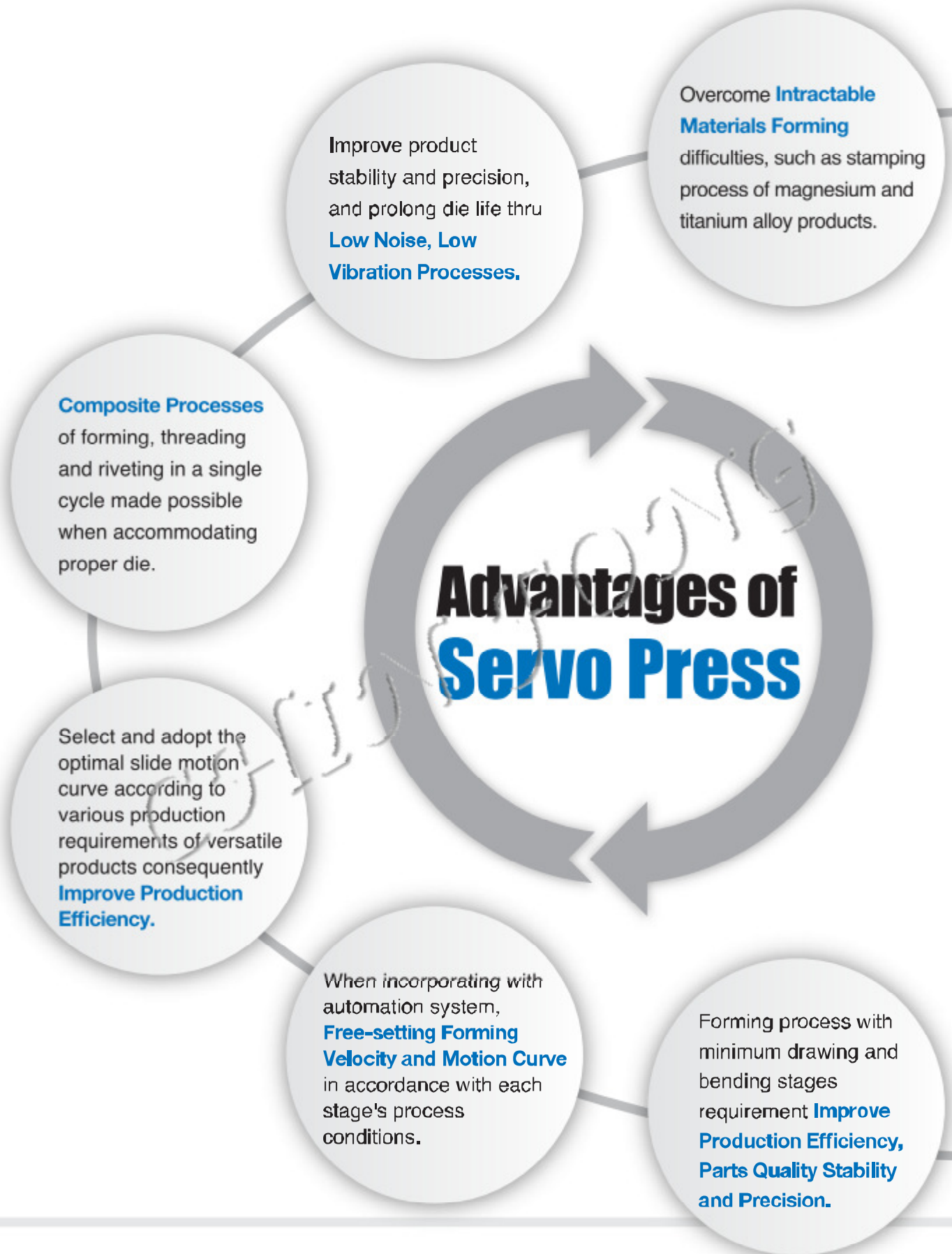


### Breakthrough the Bottleneck of Conventional Press Forming Processes

- **Increase Drawing Ratio**  
Simplified multi-stage drawing processes.  
Significantly enlarge the parts drawing ratio in one-time operation.
- **Upgraded Precision for Bending Process**  
Reduce springback effectively by using retention B.D.C. function.
- **Fine blanking**  
Set specific motion curve with appropriate die for fine blanking.

### Synergized Output by Servo Press Forming Technology

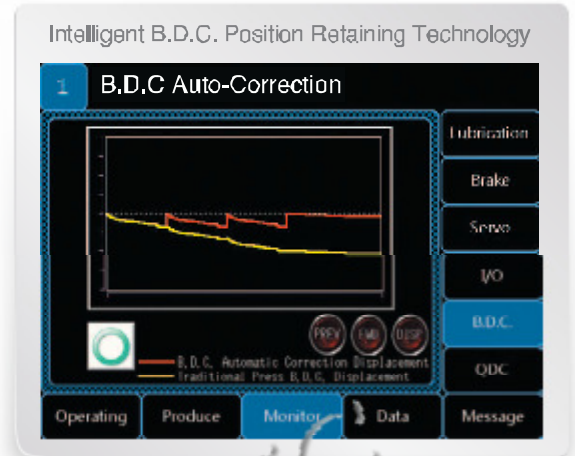
- **Improved Forming Capability for Press Forging**  
Freely setting forming speed for optimized press forging process of all kinds of material.
- **Fit Right In for Print Circuit Board (PCB) Perforation Process.**
- **In-die Compound machining**
- **Transform cutting station for specific need.**



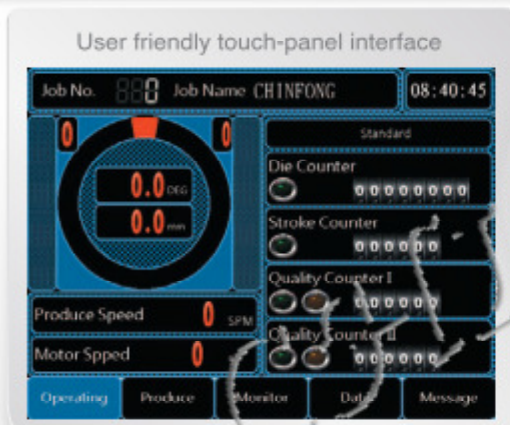
## Slide B.D.C. Repeatability Auto-Correction

Optional

Side stroke Bottom Dead Center (B.D.C.) position can be affected by temperature. Utilizing absolute signal feedback features of high-end optical linear scale, Chin Fong Servo Presses are capable of **auto-correcting** B.D.C. position, retaining B.D.C. repeatability.



## Human Machine Interface – Intelligent Curve

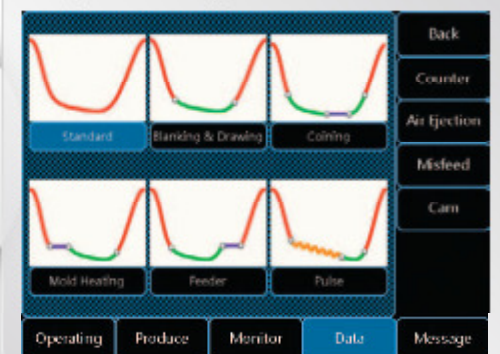


Home screen features crank angle display, slide position monitoring, tooling library, I/O monitoring, system parameter and error message... etc.

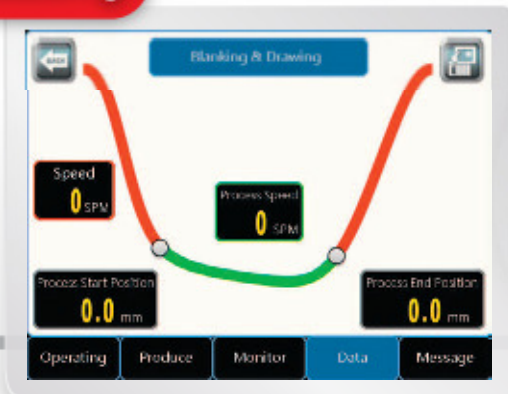
A variety of Built-in mode curves quick selection avoids detail and miscellaneous settings at start-up.

Industry-leading. Motion Curve Parameter Input Method benefits users with faster and convenient operations.

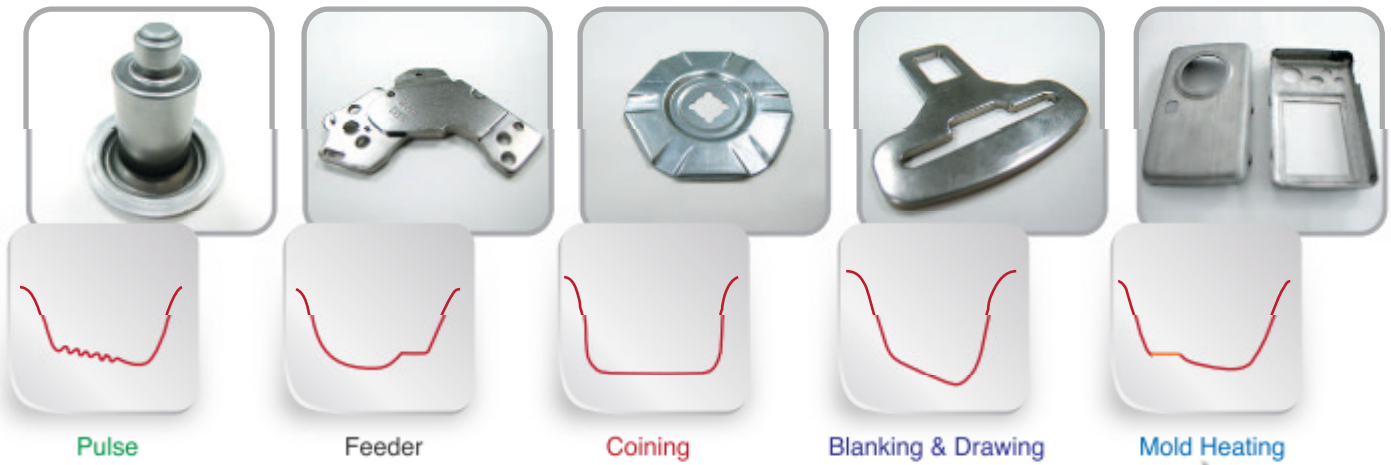
### Ready Built-in Intelligent Process Modes Curves



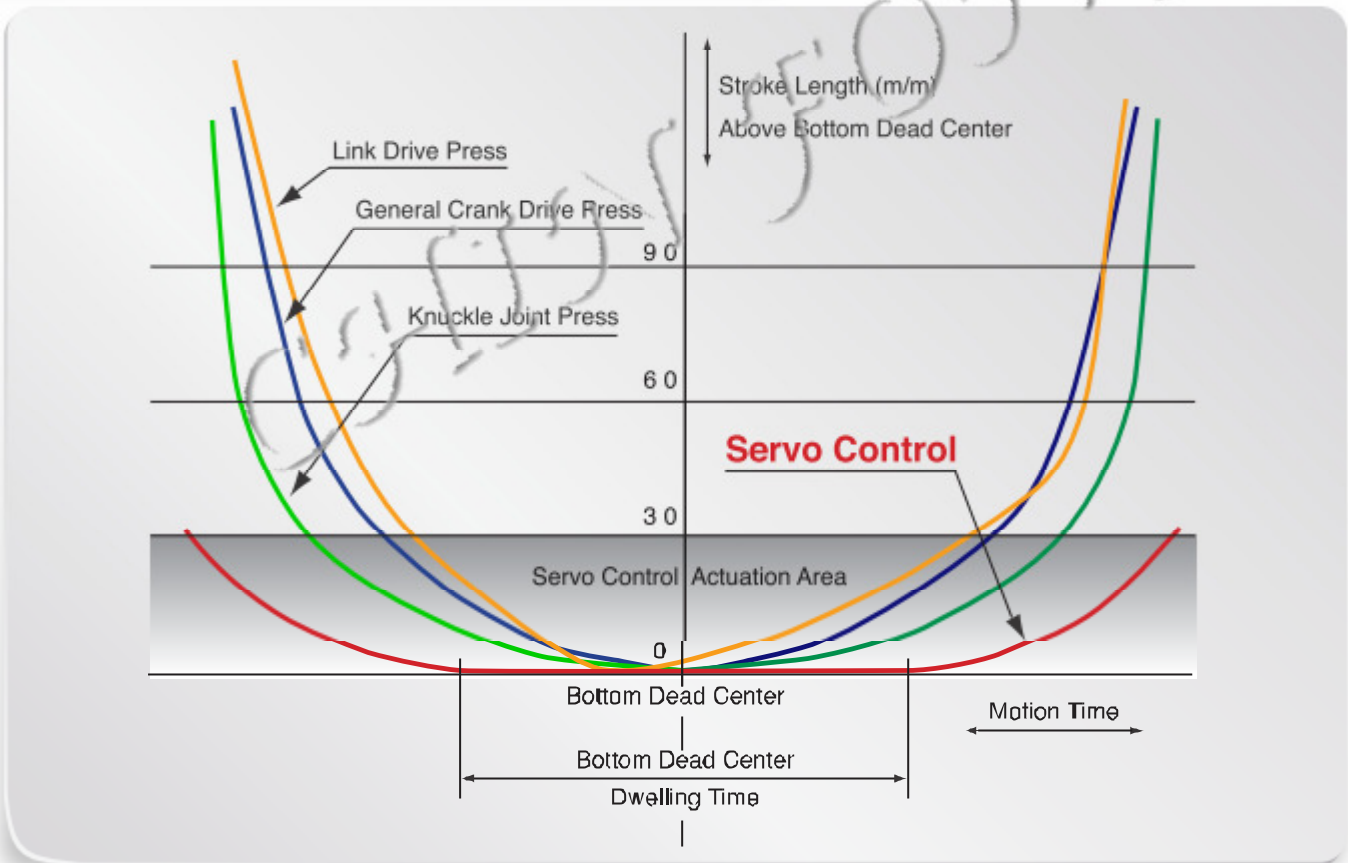
Leading!



## Diversified Intelligent Forming



## Motion Diagram of Servo Drive Press



- Free setting for slide motion speed satisfies versatile forming conditions and requirements.
- Flexibility of forming motion diagram setting and optimization to overcome forming process difficulties of intricate shapes and materials.
- Flexible B.D.C. dwelling time setting reduces spring-back in extrusion, bending and compound process forming applications.

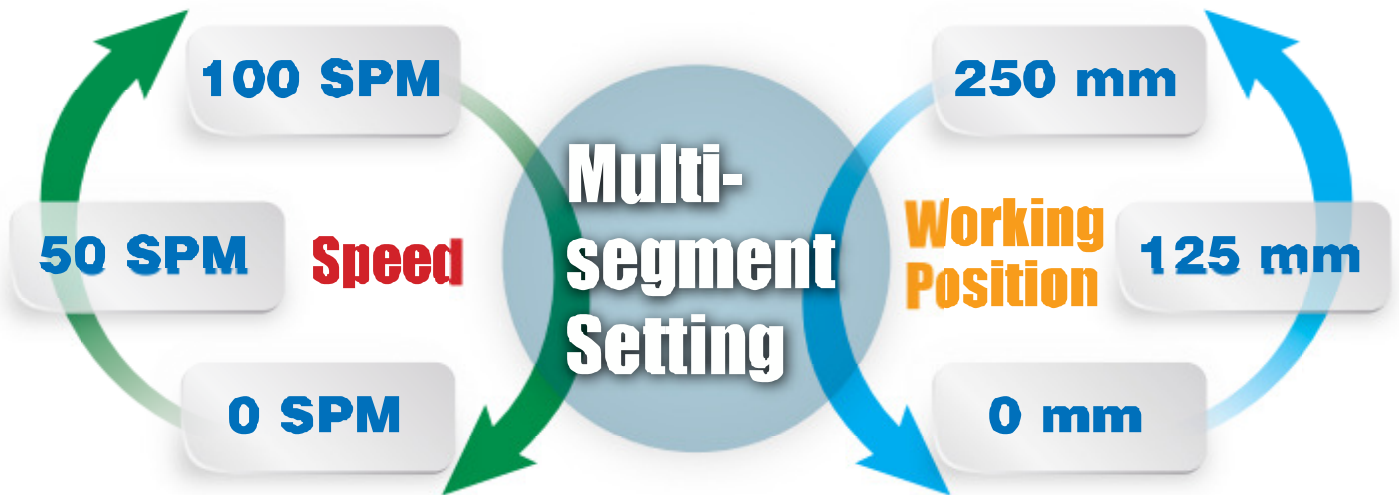
## One Machine, Multiple purpose



Effortlessly achieve multi-stage forming process requirement by utilizing servo control system while saving significant production equipment investment.

## Environment Green





### Standard Functions / Accessories

- Operation Mode Selection
- Off / Inching / Safety One Stroke / Continuous
- Mechanical Brake
- Hydraulic Overload Protector (H.O.L.P)
- Motorized Slide Adjusting Device
- Motorized Grease Pump
- Circulating Forced Oil Lubrication Device
- Slide & Die Balance Device
- PLC - Programmable Controlling System + HMI Operation Panel
- Electronic Crank Angle Display
- Electronic S.P.M Display
- LCD Type Press Status Monitor
- Electronic Rotary Cam Switch (6 spare channel)
- Misfeed Detection Consent
- Digital Die Height Indicator (unit: 0.1mm)
- Overrun Detector
- Air Ejector, 3/8", one channel
- Air Source Receptacle, 3/8", one channel
- Misfeed Detection Circuit
- Portable 2-hand Pushbutton T-stand

### Optional Function / Accessories

- Pneumatic Die Cushion
- Die Pin-hole Tap
- Extended Module of Electronic Rotary Cam Switch (8 spare channel)
- Slide Knock-out Device
- Automatic slide adjusting device
- Safety Light Curtain
- Anti-vibration Press Mounts
- Die Room Light (magnet type, 110V or 220V power source)
- Air Ejector
- Air Source Receptacle
- Automating Peripheral Equipments
- Quick Die Change System
- Bottom Dead Center Accuracy Detector
- Electronic Hand Bell
- Safety Block With Plug

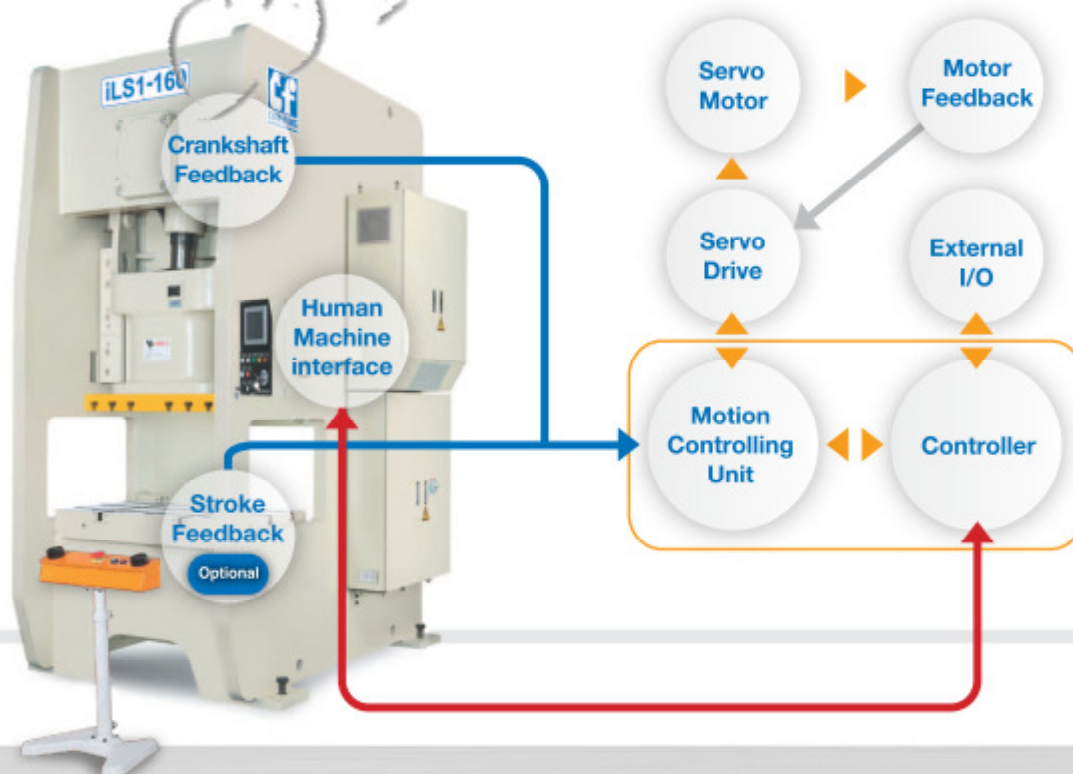


# Electronic Mechanism of Servo Driven Presses

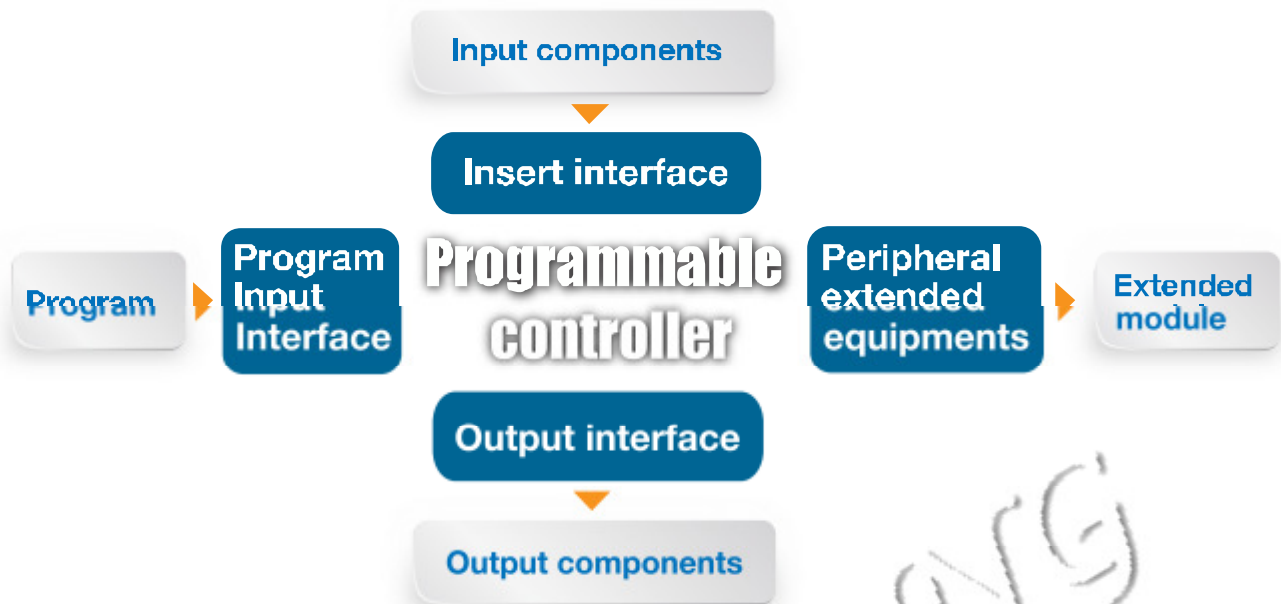


## Control System

Powerful servo electronic system serves as foundation of achieving high precision, high stability and multi-segment curve setting.



## PLC Programmable controlling System



### ❶ Employ Monitor System In PC Or Human Machine Interface :

Data can be displayed and operated on PC or human machine interface(HMI) where data is inputted via port of PLC server.

### ❷ Operating Reliability :

Microprocessor and optical coupler are applied to core component and signal processing respectively, leading to noise reduction and improving the reliability.

### ❸ Convenient Maintenance and Installation :

Hosting control panel can display various status of On/off setting connected to devices, such as solenoid switches and push-buttons, switches and indicator and so forth, through I/O LED, being able to facilitate fault detection and troubleshooting.

### ❹ Expansion Capabilities :

Enable flexible I/O module expansion and extension RAM capacity in terms of actual requirement.

### ❺ Operation Monitoring System :

Real-time monitoring system is used to monitor main motor and I/O status. HMI displays alarm signal, with historical database inquiry and troubleshooting references.

### ❻ Stamping Database Building and Management :

Memorize it in real-time, retrieve it at any time - create and manage stamping operation database easily by inputting critical operation and process parameters, such as slide motion speed, stroke length and material for different dies, into system built-in database, providing handy aids to plant management and result in significant production efficiency improvement.

## Intelligent Controlling System

### High Efficiency and High Precision

It carries high speed CPU that enables faster data processing system capability and excellent response performance, plus functional motion curve setting and control features facilitates better operations capability in accurate, efficient and stable way.

### Automation Platform Realization

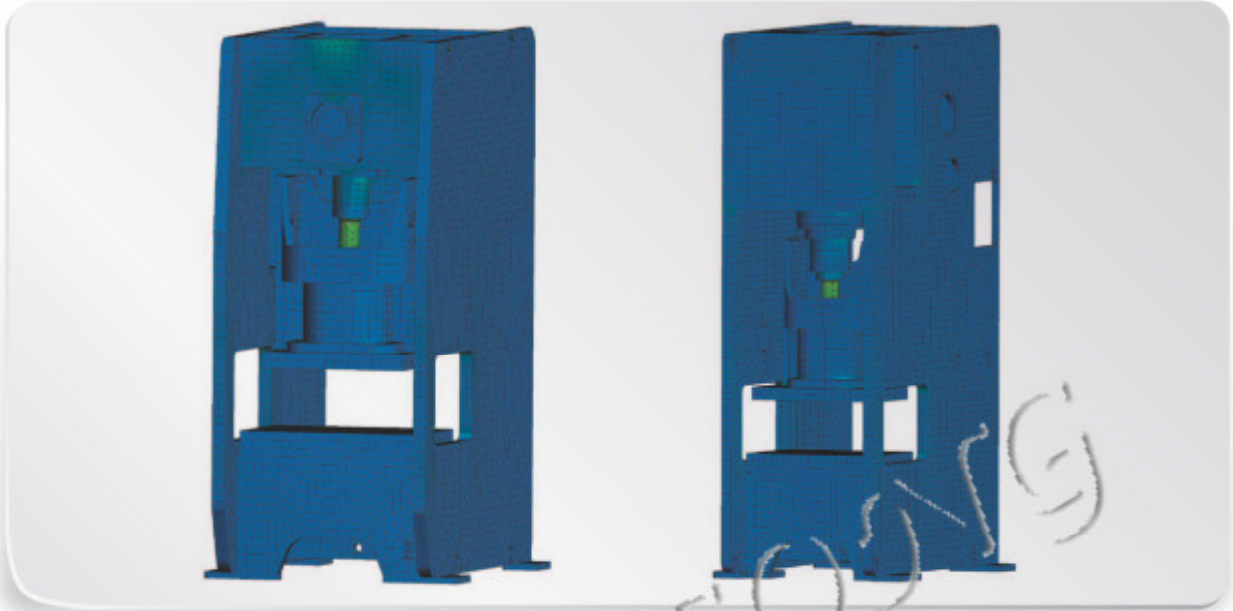
Via Ethernet connection, it makes plant management available to either operate peripheral equipment or monitor production lines.

### All-in-One Integration

It integrates functions of press motion control technology, closed-loop drive control, into single, all-in-one control module that truly integrate all equipment into one machine.

## Realize Rationalization and Optimism

CAE structural analysis by using FEA software enables to calculate force and deflection of key components, realizing rationalization and optimism in the end.

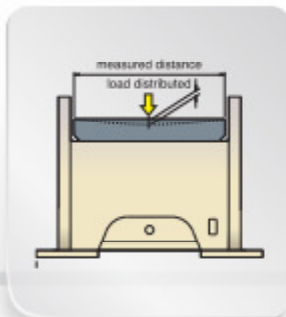


### Box Type 6-point Gib

- One piece, full-length, box type gibs assure actuated slide guiding.
- Force is delivered vertically, minimizing lateral thrust and, consequently, reducing off-center loading and friction in the gibs.

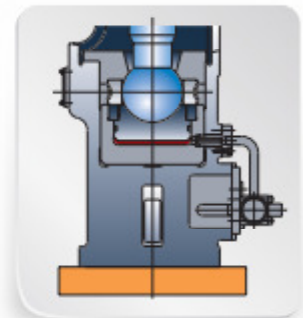


### Minimum Frame Deflection



### Highly Responsive

Hydraulic Overload Protector (H.O.L.P.)



Top-in inserted die cushion prevent foundation construction, making it convenient for maintenance.



# DLS

Multi-Purpose Link Drive  
Servo Motion Presses



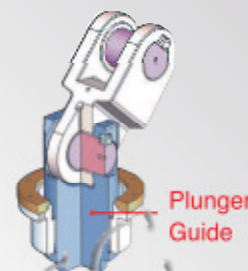
## Free Preset

**Motion Speed  
Retention Time  
Operating Start Angle  
Forming Start Angle**

Driven by press-designated high efficient servo drive, able to stabilize slide motion and press capacity.

Free-setting of motion curve is available for fine blanking, including blanking, bending, drawing, compressing and etc., improving production efficiency.

## Plunger Guided



- Lateral force occurred during press operation will be absorbed by PLUNGER GUIDE.
- Close structure in crown by using plunger guide not only provide perfect structure strength, reduce gear noise but also avoid intrusion of unexpected parts.

## Realizing-

- One machine with multiple purposes
- Improved precision of stamping product
- Prolonged die life
- User-friendly operation panel

## Adopting-

- High rigid frame
- High rigid 6-link mechanism
- Design of Boxed type six-point gib and transmission rod
- Mini touching human machine interface
- High precision servo system interface
- High precision servo system

## SPECIFICATIONS

MODEL		DLS-110		DLS-160		DLS-200	
TYPE		S	H	S	H	S	H
Capacity	Tons	110		160		200	
Rated Tonnage Point	mm	5	5	6	6	6	6
Stroke Length	mm	150	110	200	130	200	150
Strokes Per Minute	SPM	5~65	5~100	5~50	5~85	5~45	5~70
Die Height	mm	350	320	400	350	450	410
Slide Area	mm	850 x 520		700 x 580		850 x 650	
Bolster Area	mm	900 x 700		1000 x 750		1150 x 850	
Bolster Thickness	mm	120		150		160	
Side Opening	mm	750 x 500		800 x 560		900 x 610	
Slide Adjustment	mm	90		100		110	
Slide Adjusting Motor	HP x P	0.5(0.4Kw) x 4		1(0.75Kw) x 4		1(0.75Kw) x 4	
<b>Die Cushion</b>							
Capacity	Tons	8		10		14	
Pad Area	mm	500 x 300		540 x 350		640 x 470	
Stroke Length	mm	80		80		100	

# iLS1-C

Intelligent Link Drive  
Single Point Servo Press



## Realizing-

- Intelligent motion curve
- Improved stability of stamping product
- Improved component drawing
- Prolonged life of transmission mechanism
- Demand of large-size LED in panel industry
- User-friendly operation panel

## Adopting-

- High precision servo system
- Wide slide design
- Intelligent pulse mode
- High precision gear transmission mechanism
- Widen bed
- Mini touching human machine interface

## Bottom Dead Center Accuracy Detector

Optical sensor measures and revise B.D.C. height.

## Safety Light Curtain

Optical sensor allow emergency stop for safety reason.

## Motorized Grease Pump

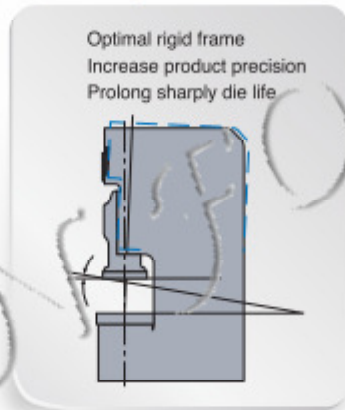
Regularly lubricate pumps and fault detector to maintain operation smoothly.

## Human Machine Interface

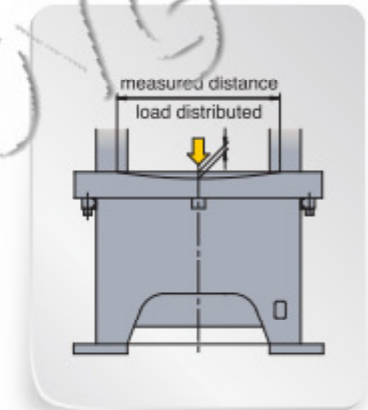
Human-centered design and user-friendly operation

## Safety Brake Device

## Super Rigid Steel Frame



## Minimum Frame Deflection



High rigidity and low deflection can reduce frame deflection resulted from stamping. Finite element analysis (FEA) of main components, such as frame, crankshaft, link, slide and etc., carries out optimal design by collecting data of force and deflection for every component.

## SPECIFICATIONS

MODEL	TYPE	iLS1-110		iLS1-160		iLS1-200		iLS1-260		
		C		C		C		C		
		S	H	S	H	S	H	S	H	
Capacity	Tons	110		160		200		260		
Rated Tonnage Point	mm	5	5	6	6	6	6	6	6	
Stroke Length	mm	180	110	200	130	200	150	250	180	
Strokes Per Minute	SPM	5~65	5~100	5~50	5~85	5~45	5~70	5~40	5~60	
Die Height	mm	350	385	400	435	450	475	450	485	
Slide Area	mm	800×520		900×580		1000×650		1100×700		
Bolster Area	mm	1280×700		1450×760		1570×850		1700×900		
Bolster Thickness	mm	120		150		160		180		
Slide Adjustment	mm	90		100		110		120		
Slide Adjusting Motor	HP×P	0.5(0.4Kw)×4		1(0.75Kw)×4		1(0.75Kw)×4		2(1.5Kw)×4		
<b>Die Cushion</b>										
Capacity	Tons	8		10		14		14		
Pad Area	mm	500×300		540×350		640×470		700×470		
Stroke Length	mm	80		80		100		100		

# iLS1-D

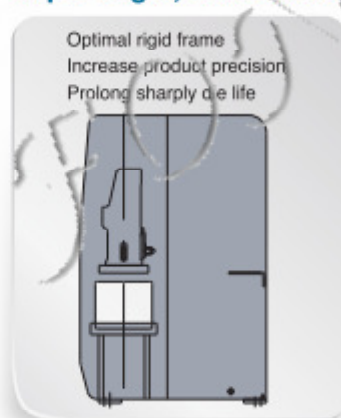
Intelligent Link Drive  
Single Point Servo Press



## Transmission Component Machining

All major friction components such as crankshaft, transmission shaft, gear are heat-treated and grinded, delivering high wear resistance and stability for heavy load and long time operation.

## Super Rigid, Reinforced Straight-Sided Frame



## SPECIFICATIONS

MODEL	TYPE	iLS1-110		iLS1-160		iLS1-200		iLS1-260		
		D		D		D		D		
		S	H	S	H	S	H	S	H	
Capacity	Tons	110		160		200		260		
Rated Tonnage Point	mm	5	5	5	5	5	5	5	5	
Stroke Length	mm	180	110	200	130	200	150	250	180	
Strokes Per Minute	SPM	5~65	5~100	5~50	5~85	5~45	5~70	5~40	5~60	
Die Height	mm	350	385	400	435	450	475	450	485	
Slide Area	mm	800x520		900x580		1000x650		1100x700		
Bolster Area	mm	1000x700		1150x760		1250x850		1350x900		
Bolster Thickness	mm	120		150		160		180		
Side Opening	mm	750x500		800x560		900x610		950x660		
Slide Adjustment	mm	90		100		110		120		
Slide Adjusting Motor	HPxP	0.5(0.4Kw)x4		1(0.75Kw)x4		1(0.75Kw)x4		2(1.5Kw)x4		
<b>Die Cushion</b>										
Capacity	Tons	8		10		11		14		
Pad Area	mm	500x300		540x350		640x470		700x470		
Stroke Length	mm	80		80		100		100		

Intelligence · Diversification · Environment Green

CHIN FONG



### CHIN FONG MACHINE INDUSTRIAL CO., LTD.

**HEAD OFFICE & FACTORY:**  
185 Chang Shui Road, Changhua, Taiwan  
<http://www.chinfong.com.tw>  
E-mail: [sales@chinfong.com.tw](mailto:sales@chinfong.com.tw)  
TEL: +886-4-752-4131  
FAX: +886-4-761-1820, 761-2814

**TAIPEI OFFICE**  
TEL: +886-3-435-5058  
FAX: +886-3-468-9648

**KAOSIUNG OFFICE**  
TEL: +886-7-238-5689-90  
FAX: +886-7-238-5091

### CHIN FONG (CHINA) MACHINE INDUSTRIAL CO., LTD.

3 Chin Fong Road, Zhenhai Economic Development Zone, Ningbo, China  
TEL: +86-574-8630-1222  
FAX: +86-574-8630-3709  
<http://www.chinfong.com.cn>

### STAMTEC

#### U.S.A.: STAMTEC INC.

4160 Hillsboro Highway Manchester  
NH 37355, U.S.A.  
TEL: +1-603-393-5050  
FAX: +1-603-393-5060  
<http://www.stm.cc.com>

#### OVERSEAS BRANCHES

**THAILAND: CHIN FONG (THAILAND) CO., LTD.**  
TEL: +66-2-919-6820-2 FAX: +66-2-919-6823  
**INDONESIA: PT. CHIN FONG INDONESIA**  
TEL: +62-21-450-7422 FAX: 62-21-458-44197  
**MALAYSIA: CHIN FONG MACHINE (M) SDN BHD**  
TEL: +60-3-3285-3155 FAX: +60-3-3290-6830

