CHIN FONG

Multi-Purpose Link Drive Servo Motion Presses

DLS

110. 160. 200 ton

DLS

Multi-Purpose Link Drive Servo Motion Presses

One Machine, Multi-Purpose

One Cycle, Multi-Segment Curves

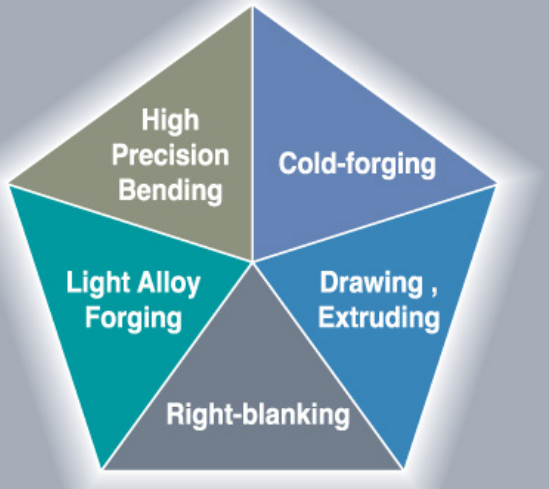
Energy Saving, Environmental Friendly

SPECIFICATIONS

MODEL		DLS-110		DLS-160		DLS-200	
Type		S	H	S	H	S	H
Capacity	Tons	110		160		200	
Rated tonnage point (above B.D.C)	mm	5	5	6	6	6	6
Stroke length	mm	150	110	200	130	200	150
Strokes per minute	SPM	~65	~100	~50	~85	~45	~70
Die height (S.D.A.U)	mm	350	320	400	350	450	410
Slide area (L.R x F.B.)	mm	650x520		700x580		850x650	
Bolster area (L.R x F.B.)	mm	900x700		1000x750		1150x850	
Bolster thickness	mm	120		150		160	
Side opening	mm	750x500		800x560		900x610	
Slide adjustment	mm	90		100		110	
Slide adjusting motor	HPxP	0.5(0.4Kw)x4		1(0.75Kw)x4		1(0.75Kw)x4	
Die Cushion							
Capacity	Tons	8		10		14	
Pad area (L.R. x F.B.)	mm	500x300		540x350		640x470	
Stroke	mm	80		80		100	

Features of servo drive press

Wider Forming Application



Cost Reduction
Prolonging press machine life
Disuse of die setter
Improvement of output

Die Improvement
Prolonging drastic die life
Complete protection of missed (double) punch in missed feed
Optimized parameter setting feature for complicated structure die (multiple cam type, compound forward transfer type and inner tapping type)

Raise Efficiency
Much slower forming time and much faster non-forming motion to raise production rate.

Increase Accuracy, Stability
Preset optimum motion curve according to forming character to increase accuracy and stability of product.

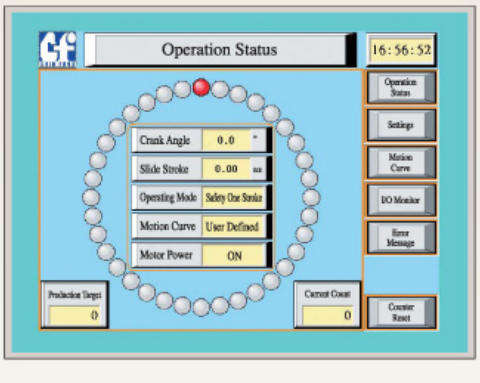
Noise and Vibration Reduction
The feature that can reduce motion speed drastically as soon as upper die touches material and can reduce breakthrough extremely achieves both steel plate blanking noise and vibration realizing next to "zero"

Safety Measure
The Digital Forming has a slide of low inertia servo driven system. The machine without air solenoid valves for clutch and brake control. eliminates possibility of accidents.

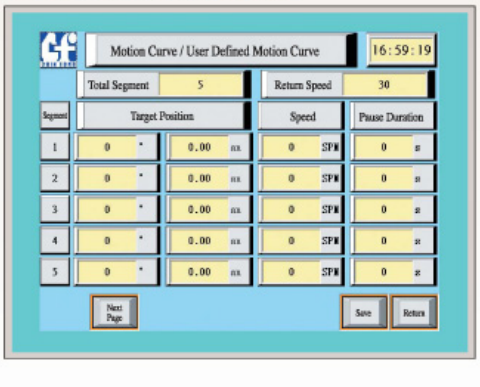
Energy Saving
Press power on/off operation such as single stroke or robot operation especially, can save consumption of electric power because of low start-up electric power. The press itself consumes practically no air (except optional equipment).

Intelligent Touch Panel

Humanized Operation Interface



User Defined Motion Curve



Ⅰ Operating Status Monitoring
1. Press Motion Detector monitors excessive wear of lining, Encoder signals, and Brake Engagement to ensure press operating safety.
2. Real time, One-Page HMI Displayed Servo Motor loading status: Ampere, Torque, and Temperature.
3. HMI Displayed Error Message with Trouble-Shooting and History.
4. Real time I/O Status Monitor.

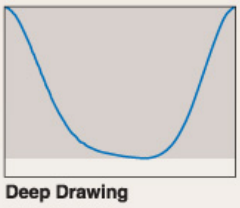
Ⅱ Motion Curves
1. 4 Built-in Motion Curves for ready applications.
2. User Defined Motion Curve: upto 20 various segments in a cycle curve can be defined by segment position, speed and pause duration parameters so as to meet complicated process requirements.

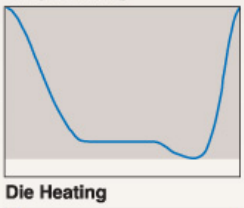
Ⅲ Electrical Angle Control
1. Electrical CAM Switches are set and monitored thru HMI screen.
2. 8 spare cams available with upto 32 channels expansion capability.

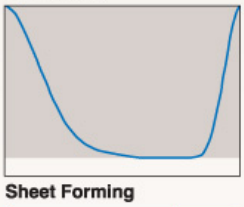
Ⅳ Operation Counters
1. Standard operation counters including Preset Counter and Life Counter.
2. Batch Counters and Cutting Scalar can be added optionally.

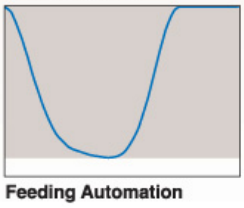
Ⅴ Provisional interface for Peripheral Devices
CAM angel controlled misfeed detection circuits A1 & B1 can be used as ON/OFF range setting, and A2 & B2 can be set for all-time detection. Both A and B port can be individually set for serial detection.

4 Built-in Motion Curves for ready applications.


Deep Drawing


Die Heating


Sheet Forming


Feeding Automation

The Digital Forming Multiplies Benefits

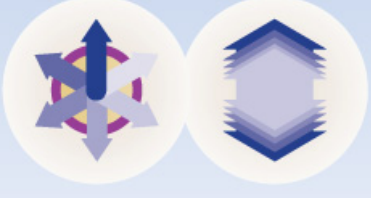
Eliminates conventional press operation's bottleneck and increases added value.

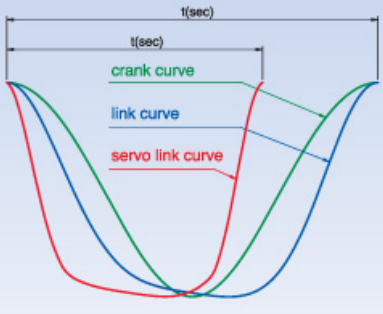
- **Improvement of Drawing Rate**
  Securing operation step reduction in multiple drawing operation
  Drastic extension of one shot drawing range.
- **Improvement of Bend Accuracy**
  The Bottom Dead Center dwelling feature reduces material spring-back extremely.
- **Right Blanking Capability**
  Right blanking (simplified fine blanking) can be easily made with standard die cushion thrust force under normal die structure. All needed is just reducing die clearance.
- **Improvement of Extruding Forming Ability**
  Available of optimized operation speed setting for forward and backward extrusion to meet with material. Knockout (upper and lower) mechanism is also simplified.
- **Applicable to Print Circuit Board Blanking**
- **Compound Processing Capability with Single Die**
  (three-step forward transfer and inner tapping)
- **Possibility of Changing in Cutting Operation Procedure**

Innovation conception for the conventional presses' drive being substituted by servo motor

The Digital Forming Innovates Your Image of New Century's Press Machine

Shift From Slide Angle Concept to Position Concept





Ultimate Motion Generated From Optimized Parameter Setting For Motion And Motion Time.

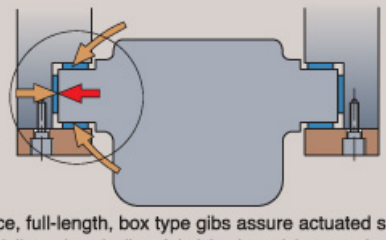
Slower The Part Forming Portion As Much As Possible, While Faster Other No-Forming Motion As Much As Possible!

Free Preset

- **Motion Speed**
- **Operation Start Angle**
- **Bottom Dead Center Dwelling Time**
- **Forming Start Angel**

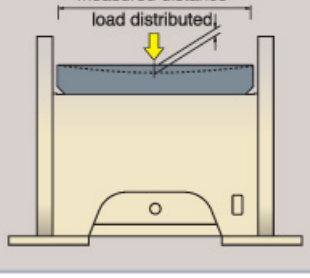
Driven by the press-designated servo drive motor-high torque with the full energy at low speed, able to stabilize
Slide motion and tonnage
Free setting forming curve is available with "Jog Pulse" in the compliance of the requirement for all kinds of forming-blanking, bending, drawing, extruding, also the productive is increased greatly

Box Type Six-Point Gib

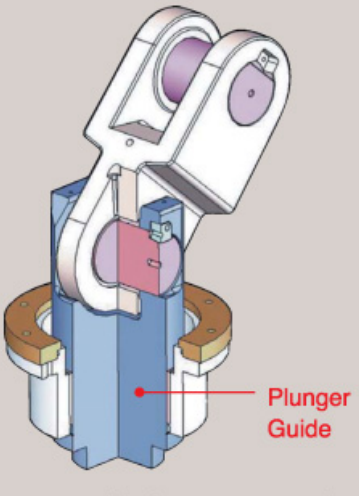


One-piece, full-length, box type gibs assure actuated slide guiding. Force is delivered vertically, minimizing lateral thrust and, consequently, reducing off-center loading and friction in the gibs.

Minimize Frame Deflection



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.

BOLSTER

Fig. 1

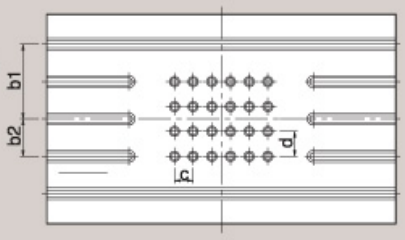


Fig. 2

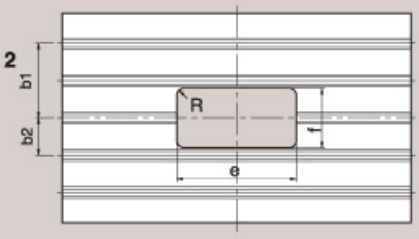


Fig. 3

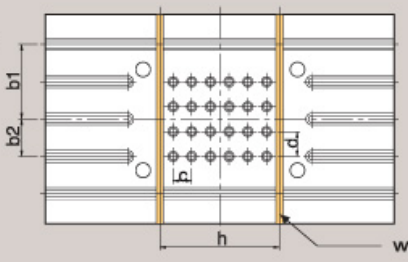
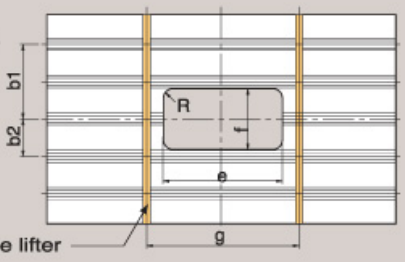


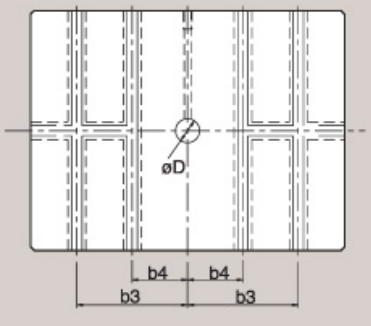
Fig. 4



unit: mm

MODEL	DLS-110	DLS-160	DLS-200
Type of T-Slot	B	B	B
No. of T-Slot	3	3	5
No. of Pin Hole x Dia.	20 x ø28 $^{+0.5}_{+0.1}$	24 x ø28 $^{+0.5}_{+0.1}$	30 x ø28 $^{+0.5}_{+0.1}$
c x d	90 x 90	90 x 90	100 x 100
b1	200	225	265
b2	-	-	115
e x f	400 x 200	440 x 220	480 x 240
R	30	30	30
g	480	520	580
h	450	360	400

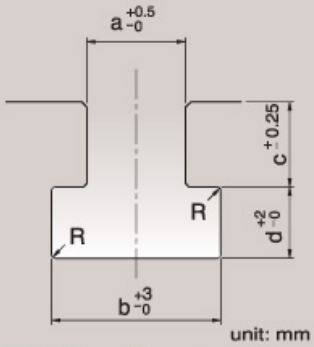
SLIDE PLATE



unit: mm

MODEL	DLS-110	DLS-160	DLS-200
Slide Plate Area (LR x FB)	650x520	700x580	850x650
Type of T-Slot	B	B	B
No. of T-Slot	2	4	4
Shank Hole Dia. D	Ø 50	Ø 65	Ø 65
b3	150	300	300
b4	-	150	150

T-Slot Detail



unit: mm

Dim. / Type	A	B
a	22	28
b	37	48
c	24	28
d	16	20
R	1	1

Standard Functions / Accessories

- Portable 2-hand Pushbutton T- Stand
- Operation Mode Selection
  Off / Inching / Safety One Stroke / Continuous
- Hydraulic Overload Protector(H.O.L.P.)
- Overrun Detecter (Brake Monitor)
- Dual-coiled Solenoid Valve
- Motorized Slide Adjusting Device
- Digital Die Height Indicator (unit:0.1mm)
- Manual Grease Pump
- Air Ejector, 3/8", one channel
- Air Source Receptacle, 3/8", one channel
- High Torque Servo Motor
- Wet type brake
- Touch Panel
- Oil Lubrication for Link Drive Mechanism

Optional Functions / Accessories

- Die Cushion
- Safety Light Curtain
- Slide Knockout Device
- Motorized Grease Pump
- Safety Block with plug
- Automation Air Circuit 3/8"
- Quick Die Change System
  - Upper Die Clamps
  - Die Lifters
  - Lower Die Clamps
  - Die Arms
- Anti-vibration Press Mounts
- Die Room Light
- Bottom Dead Center Accuracy Detector

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