

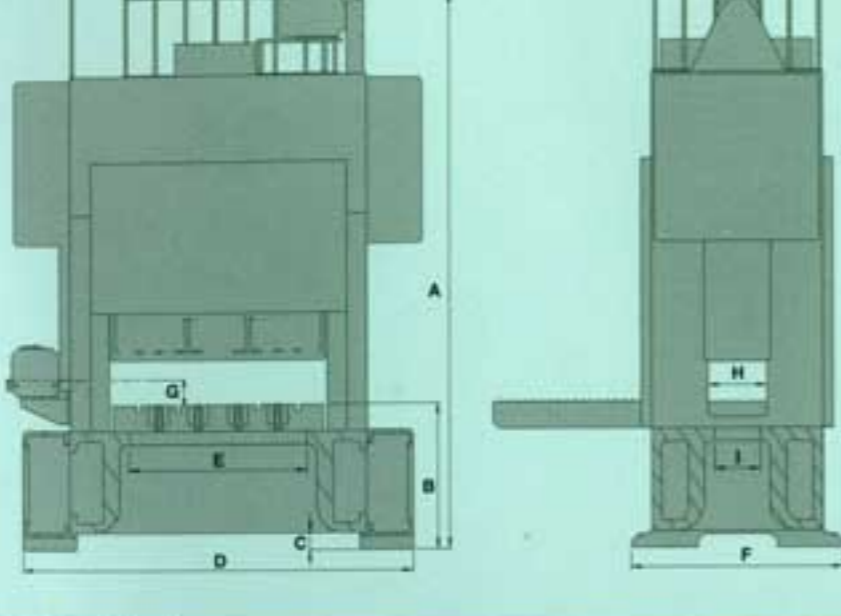
Evolutional & Intelligent

Straight-Side Two-Plungers High-Speed Precision Press

HD series



HD-220-450



Machine Specification				
Type	HD-220	HD-300	HD-350	HD-450
Capacity	tons 220	300	350	450
Slide Stroke	mm 30	30	30	30
Press Speed	spm 200-500	150-400	150-400	100-350
Shutheight	mm 400	520	520	550
Area of Bolster	mm 1700x50	2000x1000	2300x1000	2600x1200
Thickness of Bolster	mm 200	200	200	220
Area of Slide	mm 1700x650	2000x750	2300x750	2600x900
Shutheight Adjustment	mm 30	60	60	60
Main Motor	hp 50	60	60	75

Dimension of Press				
Height of Press (A)	mm 4405	5178	5178	6086
Height for Operation (B)	mm 1100	1420	1420	1800
Height for Scrap out (C)	mm 130	200	200	300
Width of Press (D)	mm 2960	3520	3820	4380
Width of bed opening (E)	mm 1350	1600	1900	2150
Depth of Press (F)	mm 1600	1800	1800	2100
Height of feed line (G)	mm 190 ± 25	245 ± 25	245 ± 25	265 ± 25
Width of Upright Opening (H)	mm 450	470	470	530
Depth of bed opening (I)	mm 350	400	400	480
Net weight	tons 36	54	63	80

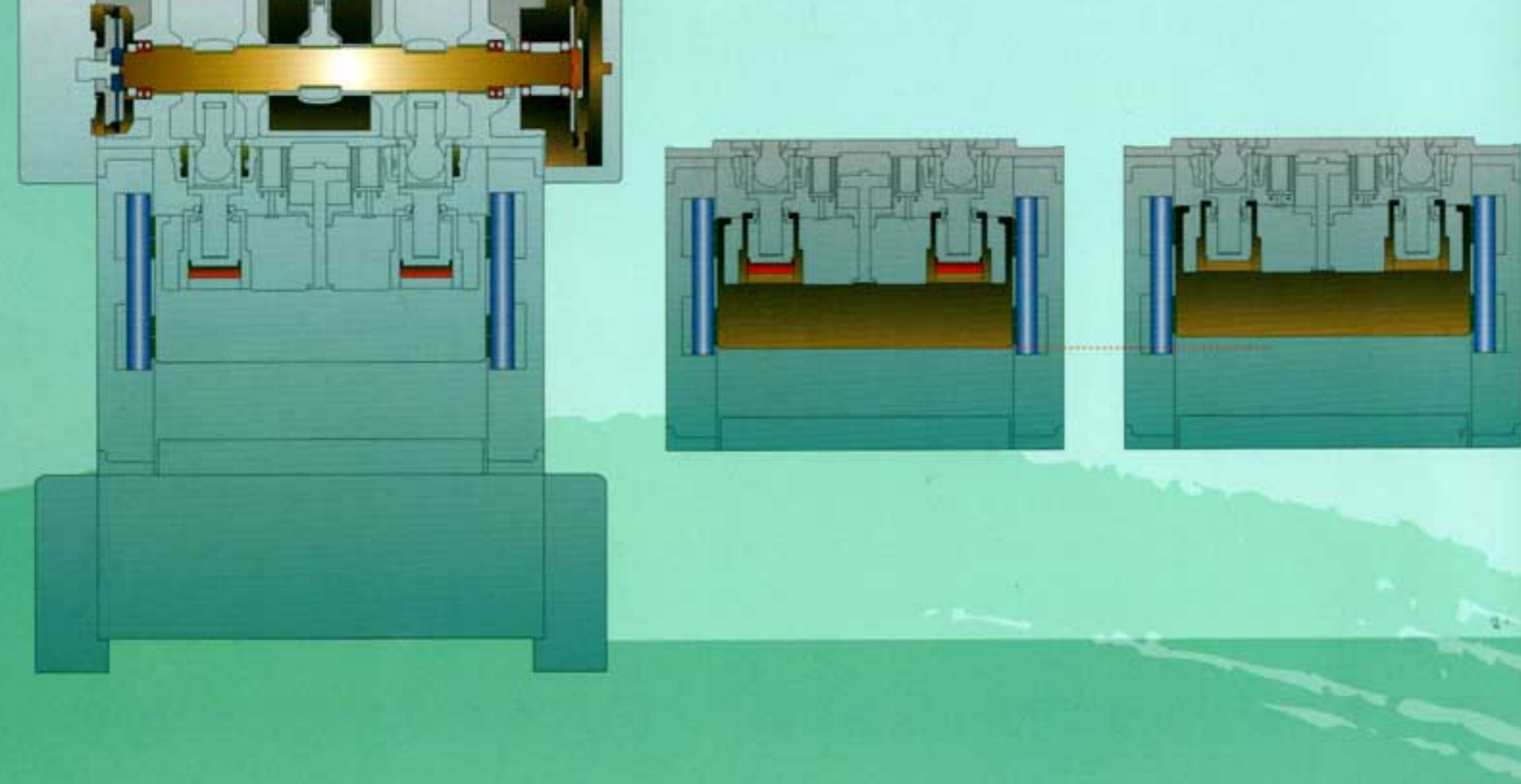
We reserve the right to modify all data contained in this catalogue without notice. (Please contact with us for detail specification & dimension of the press.)

Standard Accessories	Optional Accessories		
Slide adjust motor (0.01mm)	Slide quick lift		
Front-rear safety guard	Gear change roll feeder		
Joint for air gun x 1	Straightener (Lamination)		
Mis-feed joint x 4	Dual head coiler (Lamination)		
Material-end joint x 1			
Batch/Cam joint x 5			
Inverter			
Colorful automatic computer control system			
Anti-vibration spring type cushion			
Die Arm			
Die Lifter			

Gear change type high speed feeder			
Type	FDG250	FDG400	FDG500
Max width (mm)	250	400	500
Max thickness (mm)		2.3	
Pitch range (mm)		12-360	
Max output (m/min)		60	

Straightener with S loop for lamination			
Type	FRS250	FRS400	FRS500
Max width (mm)	250	400	500
Drive motor (hp)	3	5	5
Valid thickness (mm)		0.3-1.2	
Max output (m/min)		60	

Dual head uncoiler for lamination (non-motor, hydraulic expand)			
Type	DCT250	DCT400	DCT500
Max width (mm)	250	400	500
Max load per head (ton)	1.5	2	2.5
Max. outside dia (mm)		1200	
Valid inside dia (mm)		450-520	



Frame of cast iron and excellent design of structure

3 sets of massive frame resist deflection and reduce vibration.

6 Points of crank supporting **Now!!**

The distance between supporting is short enough to resist deflective stress. 2 bearings and 4 brass bushings are applied to get smaller clearance and resist wear throughout years.

Eccentric Shaft

The strength of eccentric shaft is more than general crankshaft.

Separated clutch and brake

The torch of separated clutch & brake is bigger, so braking time and angle get less. Balanced load at two side can reduce wear of bearings. If mechanical parts fail at clutch or brake, press stops instantly.

Dynamically balanced counter weight

Dynamically balanced reserves weight of upper die (4% of press tonnage) to eliminate the inertia produced by reciprocation. Hence, vibration can be reduced to an extreme low level.

Slide quick lift **Now!! Optional**

The height of slide quick lift is 70mm. It helps users to solve the problem occurred on tooling quickly such as material sticking, tool jamming, scrap or punch changing. After trouble shooting, return slide to its original height quickly and the B.D.C. is kept still without readjusting. Without slide quick lift, it must adjust slide upward to solve tooling problem. Then return to the original height and readjust the bottom-dead center. That takes much time.

Hydraulic locking device of screw rods

Hydraulic locking device of screw rods eliminates the clearance to keep reciprocating accuracy.

Solution for tool jam without slide quick lift

Although the rods is locked tight by hydraulic during assembly, hydraulic reservoir is designed inside plungers. Tool jam can be released easily by releasing hydraulic pressure at reservoir.

Circulating lubrication & cooler system

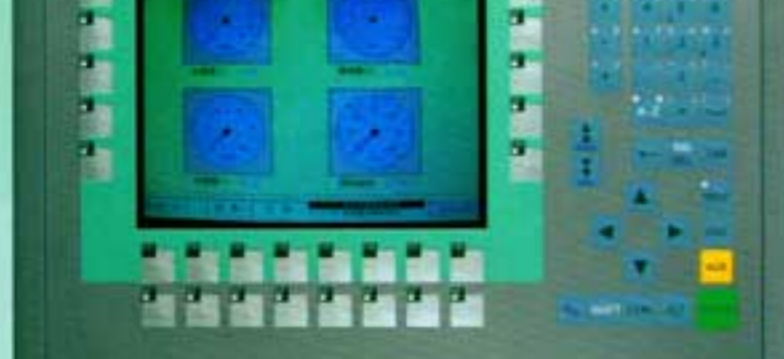
Oil reservoir is inner of bed. All components are lubricated to prevent from wear by pump. (no piping inside the cranks)

Guiding system of slide

Dual plungers isolate slide from angular front-to-back movement of connections and bear up more upward eccentric load during stamping.

8 square long guide gibs are applied. Except absorbing the sideward thrust during stamping, it's allowed larger eccentric load stamping.

Colorful automatic computer control system with 4 points load monitor **Now!!**



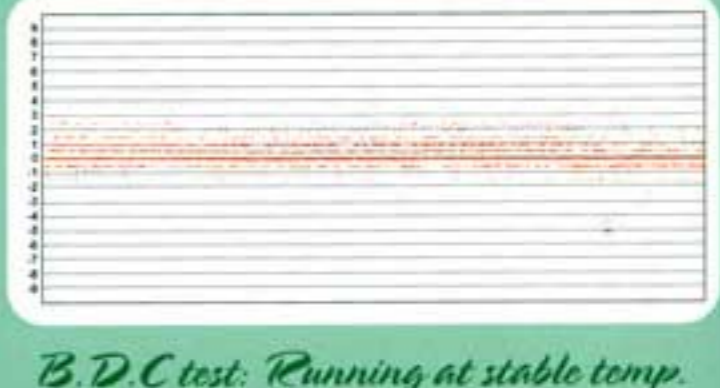
Colorful TFT-LCD screen is applied to operate simply by variety color of screen and letters display. 50 sets of tool memory includes running hours, die height, running speed, pitch, feel-height, detector setting and so on. It can auto adjust press parameter and device's position and save much time while mounting tools and setting on press. Temperature, air & oil pressure, motor current and so on are all displayed on screen. It helps users understand the situation quickly without searching relative gauges inside the press. Every situation, operation and message is recorded at the system history memory. It shortens trouble shooting with tracing past records. With 4 points load monitor, operator could observe the stamping loading and punch & insert worn out situation. It helps operator to decide when the tooling should be re-grounded. The other safety device, such as B.D.C detector could be merged into this control system. Reserve function for user includes 2 reset-able counters, 4 settings of detecting angle of mis-feed, 5 settings of output angle of cam/batch.

Dynamic Accuracy Test

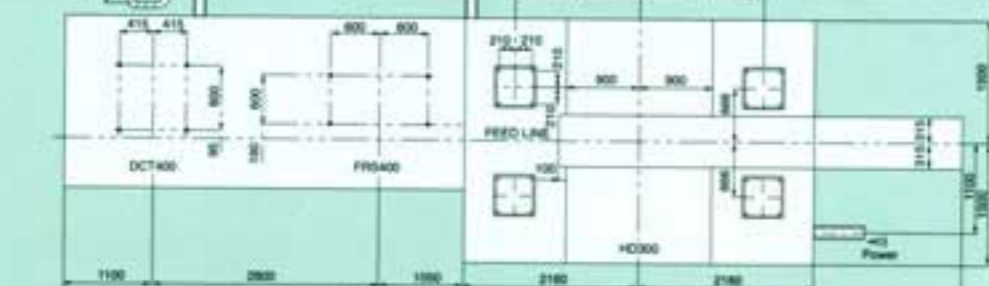
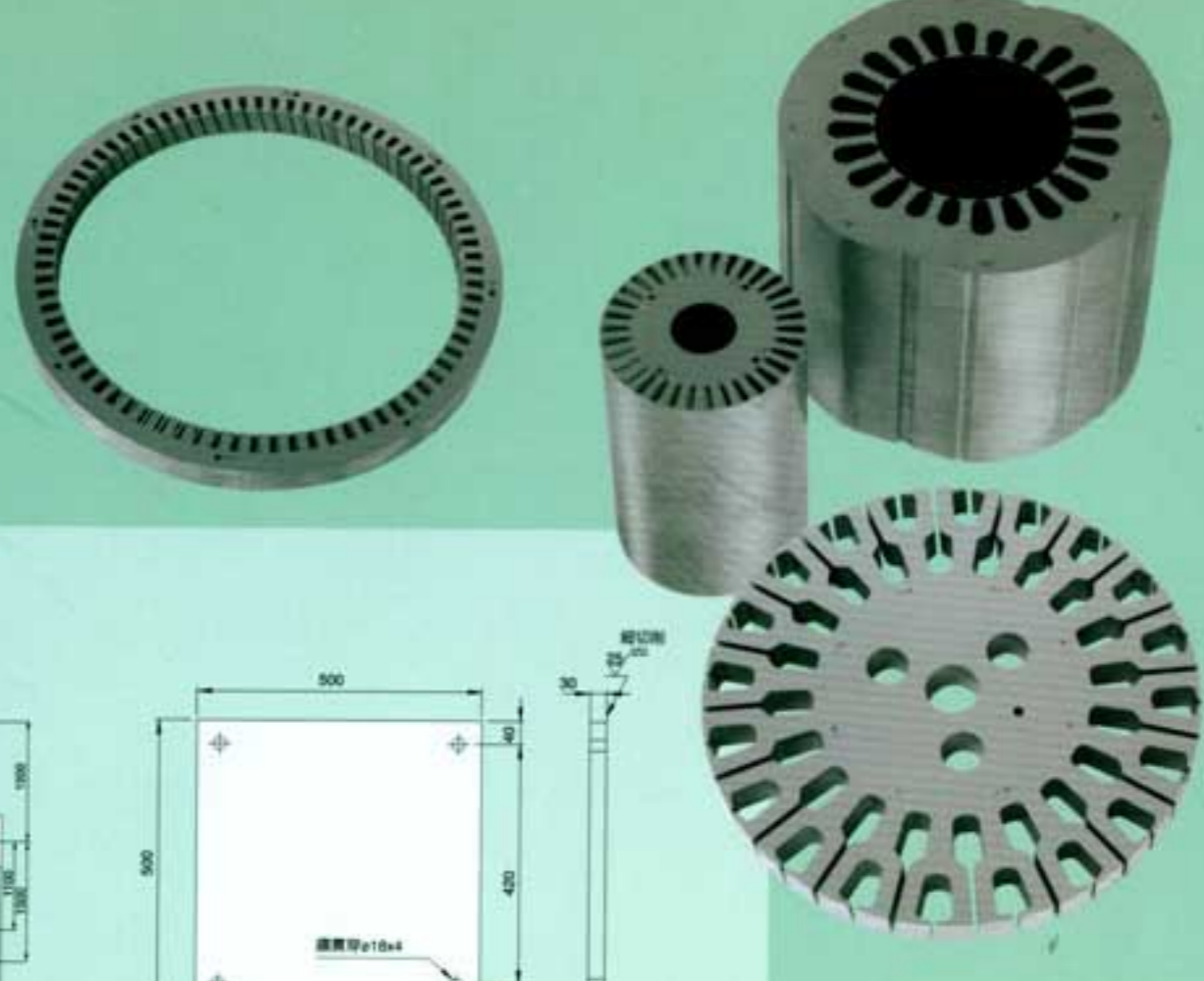
Except jis static accuracy test, Apex passes dynamic accuracy test before shipping approval.



B.D.C test: Start running at constant speed
Press start continuous running. The maximum gap is 0.08mm. The B.D.C. keeps stable after 30 minutes during running continuously.



B.D.C test: Running at stable temp. & constant speed
After press temp. keeps stable, press keeps running and record the B.D.C positions of 1,000 stamping. The maximum gap is ±0.0025mm (±2.5 μm).



Foundation drawing of press line (press, feed, straightener, uncoiler)
(Please contact with us for detail drawing)

More than a press producer, INGYU is devoted to creating the value for customers.

INGYU PRECISION INDUSTRIES CO., LTD.
43-11, Shu-Tsun Rd. Sha-Lu, Taichung Hsien, TAIWAN 433
TEL: +886-4-26358569 FAX: +886-4-26353008
E-mail: info@ingyu.com

Superior Stamping Technologies
PO Box 402, Ridgely, New Jersey, USA 07657
TEL: 1-201-945-5874 FAX: 1-201-945-6498
E-mail: info@stamericas.com

Ing Yu International LLC
RM. G. 21F, Tower 1, Gateway Plaza,
No. 2801 Xie-Tu Rd. Shanghai, CHINA 200030
TEL: 86-21-64262528 FAX: 86-21-64260110
E-mail: ingyui@ah163.net

MAWI GmbH
Bismarck 18, D-75323 Bad Wildbad-Calmbach GERMANY
TEL: +49-7081-99444-10 FAX: +49-7081-99444-10
E-mail: peter.kaiser@mawi-gmbh.de

Unitech Metalforming Consultancy Services
S. Eshwarthana Road, Camr, Pune, 411001 INDIA
TEL: +91-20-263-60874 FAX: +91-20-263-60874
E-mail: peter@unitechmicro.com