



**PRESSES**

MECHANICAL • HYDRAULIC • SERVO

## *Straight Sided Double Crank Mechanical Presses*

*MAX 2 Series*

200T - 630T



Safeties conform to:  
CE (EN-16092 : 2018)  
OSHA 1910.217  
CSA-Z142

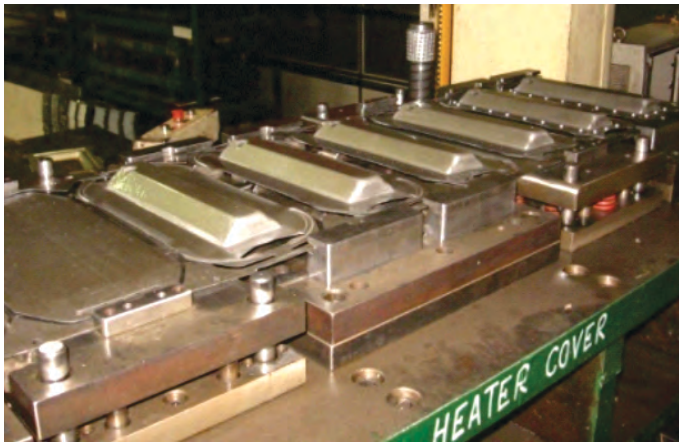
**Cost Effective Stamping Solution**

ISO 9001:2015

**Ideal for Progressive Operations • Suitable for Forming, Punching & Blanking**

**Accurate Stampings & Enhanced Die Life • Prompt Local Service Support**

**Ideal for Progressive Operations**

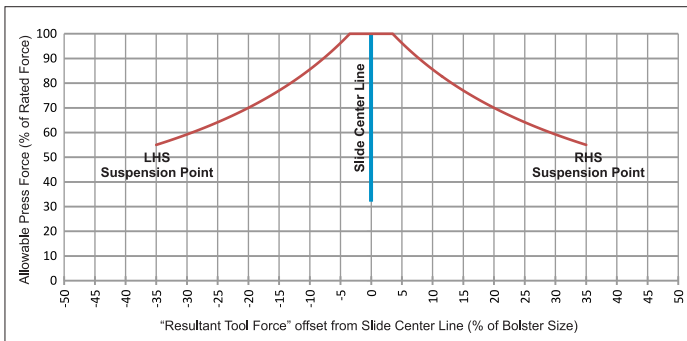


Wide side opening enables automated feeding of coil and blanks to produce long length & narrow width components through progressive feeding.



315 T MAX 2L Press supplied for Progressive Die Application

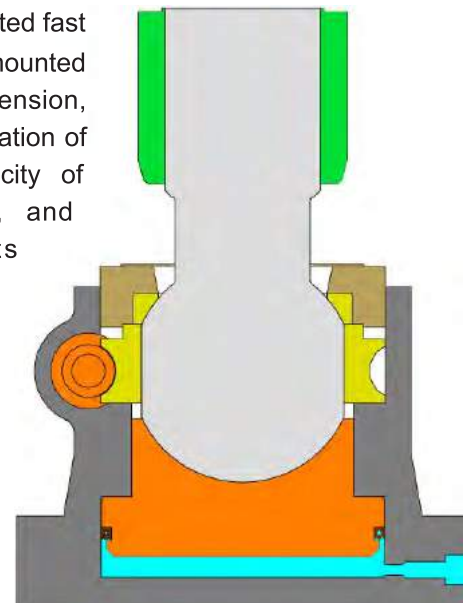
**Eccentric Load Bearing Capacity**



High eccentric load bearing capability due to wide space between suspension points, extra rigidity and long slide height helps in producing asymmetrical components.

**Safety of Machine & Die**

Hydraulically operated fast acting mechanism mounted under each suspension, senses the application of load beyond capacity of each suspension, and thereby prevents damage to Press and Die by quick stoppage.



**Precise and Vibration free Transmission**



**Crank Shaft**

Forged from Normalized Alloy Carbon Steel, Ultrasonically Tested.

CAD analysis ensures elimination of stress concentrations and metal fatigues.

**Gear**

Gears of drive train machined to precision grade, conforming to DIN Grade 7 or AGMA 10 and better, for smooth torque transmission and vibration free operation.

**Pinion**

Forged Alloy Steel, Hardened & Tempered, Ultrasonically Tested, Accurately Machined and Ground.

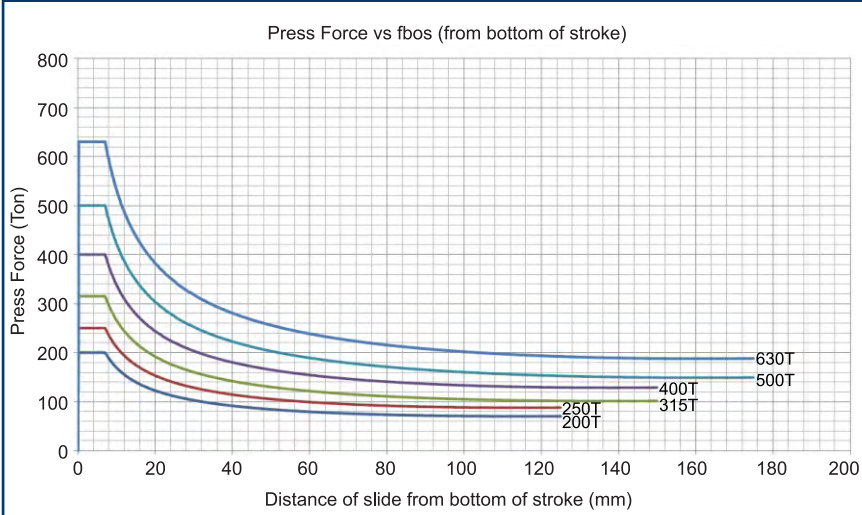
**Connecting Rod**

Steel Casted, Normalized and Ultrasonically Tested.

**Flywheel**

Dynamically balanced Flywheel for long life of bearings.

## Force vs Stroke Curve (MAX 2L)



## MAX 2L

- High Speed and Production
- Ideal for Coil feed and Progressive work

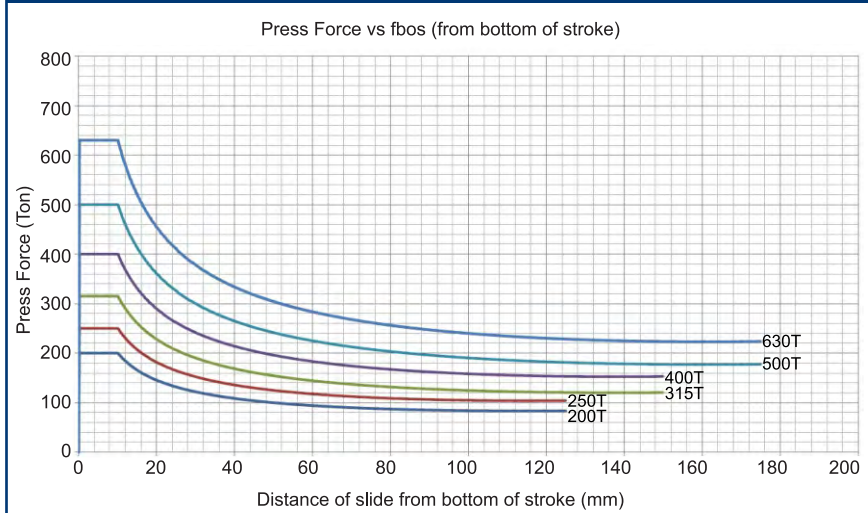
## MAX 2H

- High Work Energy
- Enhanced Die Cushion Capacity
- Forming Capability
- Ideal for Transfer work

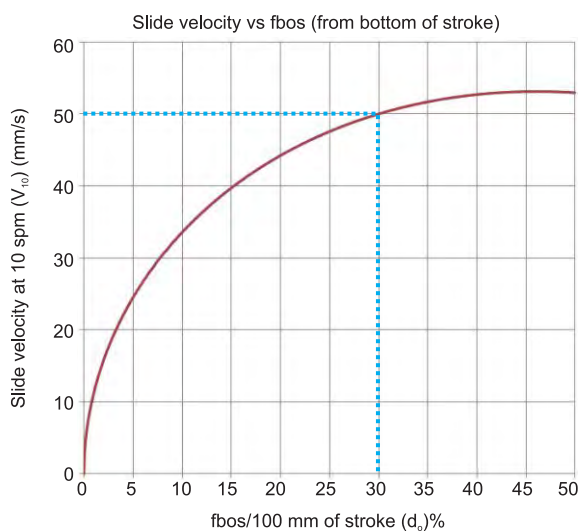
MAX2 Series Presses are easy to interface with various automation equipment like Transfer, Coil Feed Line etc.

Further, our experienced team can help you to select a press suitable for your stamping requirements and application.

## Force vs. Stroke Curve (MAX 2H)



## Velocity vs Stroke Curve



### Slide Velocity Calculation

Machine SPM = R

Stroke Length = L (mm)

Distance fbos = d (mm)

$V_d$  = Slide Velocity at distance fbos d (mm/s)

$d_0 = 100 \times d/L(\%)$

$V_{10}$  = See chart according to  $d_0$  (mm/s)

$V_d = V_{10} \times R \times L/1000$  (mm/s)

### Example:

Machine SPM = 20

Stroke Length = 300

Distance fbos = 90 (mm)

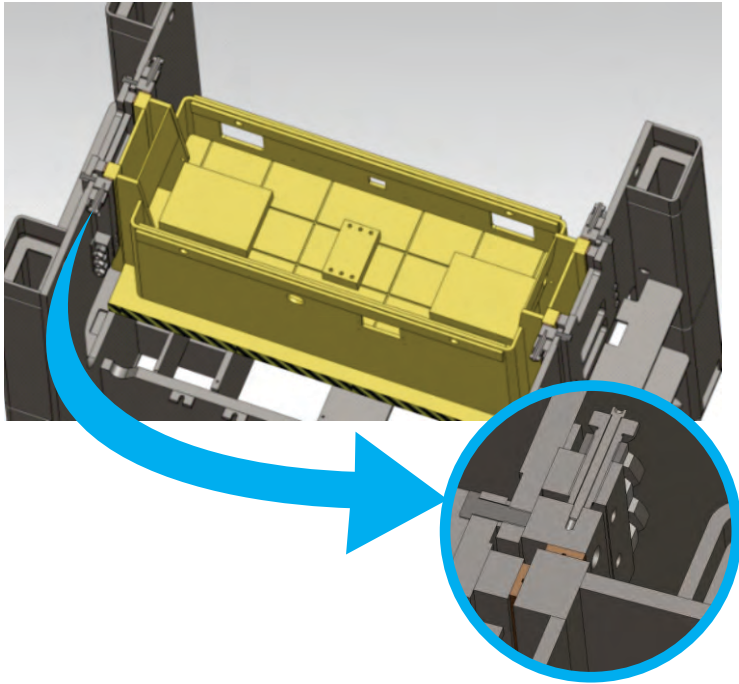
$V_d$  = Slide Velocity at distance fbos 90 (mm/s)

$d_0 = 100 \times 90/300 = 30 (\%)$

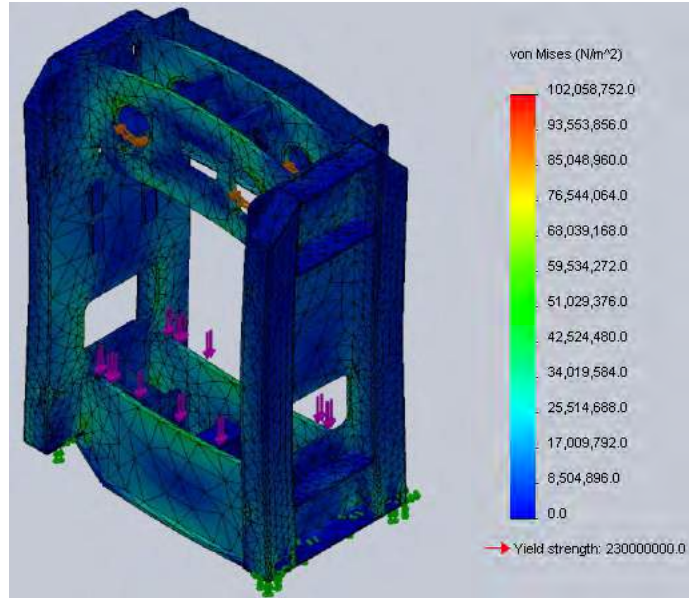
$V_{10}$  = See chart according to 30% = 50 (mm/s)

$V_d = V_{10} \times R \times L/1000 = 50 \times 20 \times 300/1000 = 300$  (mm/s)

## High Precision



## High Rigidity



Frame & Slide fabricated from tested Steel Plates and stress relieved, to ensure fatigue-free long life of the frame.

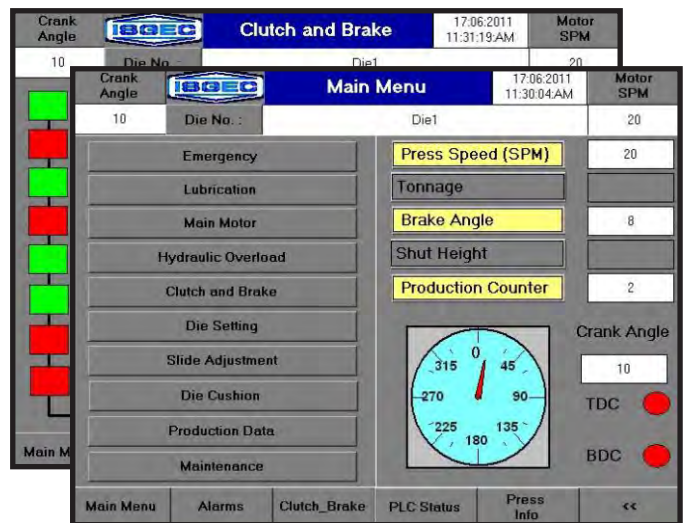
Fatigue life of stress relieved Press structure verified using Finite Element Analysis to ensure maximum rigidity for accurate stampings & enhanced die life.

Precision machined 8 point extra long guide for precise Slide movement, conforming to JIS 6402 B Grade-I for geometrical accuracies.

## Safety of Operator



## User Friendly Operator Interface



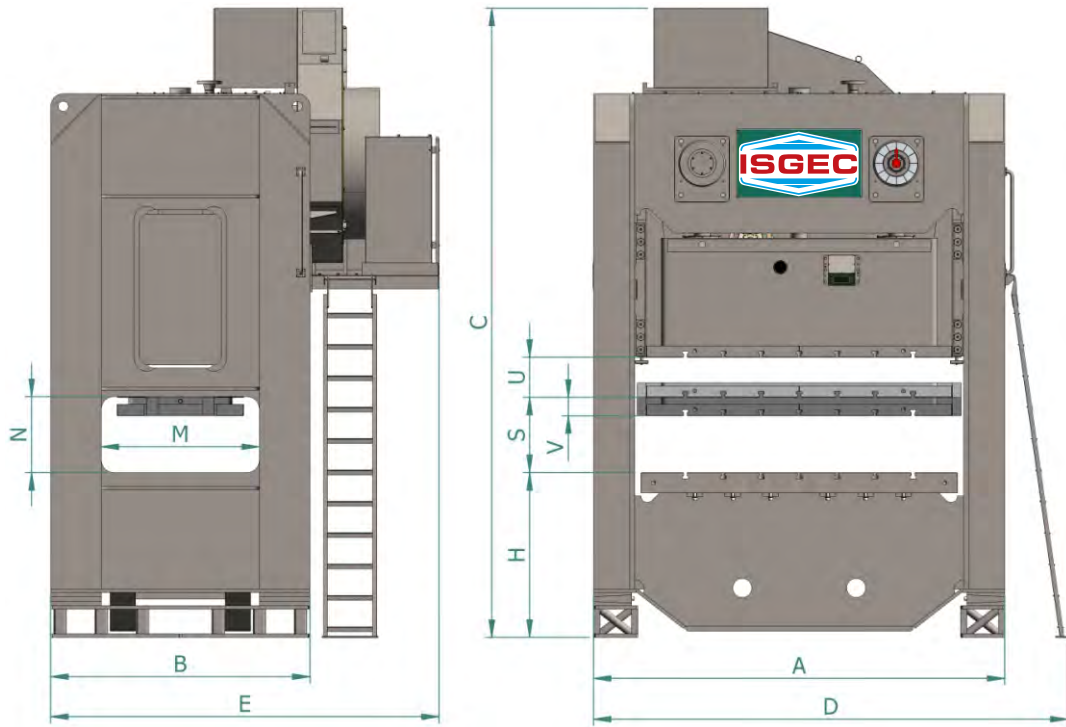
Press is equipped with dual safeties in control systems with monitoring of redundancies.

- Dual safety valve provided for Clutch and Brake actuation for dual redundancy of the system.
- Anti repeat circuit with dual circuit.
- Emergency stop buttons on panel and run button station.
- Two hand Run Button Station.
- Photoelectric Safety Guards (Optional).
- Compliance with CE/OSHA safety regulations provided on demand.



CE Safety Certificate

- Programmable Logic Controller with user friendly operator interface through HMI screens with Diagnostic feature.
- Ergonomically designed HMI Screens developed after practical feedback from the Press users.
- Screen Navigation with soft keys.
- Status & Alarm display for ease in operation.



## Technical Specifications

Description	Unit	200T		250T		315T		400T		500T		630T			
		MAX2L	MAX2H	MAX2L	MAX2H	MAX2L	MAX2H	MAX2L	MAX2H	MAX2L	MAX2H	MAX2L	MAX2H		
Model No.															
Maximum Capacity	kN	2000	2000	2500	2500	3150	3150	4000	4000	5000	5000	6300	6300		
Rated Distance	mm	7	10	7	10	7	10	7	10	7	10	7	10		
	inch	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4		
Strokes Per Minute (Fixed)	SPM	40	23	40	18	37	18	37	16	30	16	30	16		
Strokes Per Minute (Variable)*	SPM	20-55	15-30	20-55	12-24	20-55	12-24	30-50	10-20	20-40	10-20	20-40	10-20		
Strokes Per Minute (Intermittent)	SPM	20	12	16	9	14	9	12	8	12	8	12	8		
Available Work Energy per stroke at continuous Mean SPM	kJ	19	32	22	45	32	56	37	76	60	92	74	106		
Available Work Energy per stroke at Maximum Intermittent SPM	kJ	26	35	32	45	40	56	54	76	65	92	74	106		
Stroke Length (Fixed) (U)	mm	250	250	250	250	300	300	300	300	350	350	350	350		
	inch	9.8	9.8	9.8	9.8	11.8	11.8	11.8	11.8	13.8	13.8	13.8	13.8		
Shut Height (SDAU) (S)	mm	550	550	600	600	800	800	800	800	1000	1000	1000	1000		
	inch	21.7	21.7	23.6	23.6	31.5	31.5	31.5	31.5	39.4	39.4	39.4	39.4		
Slide Adjustment (V)	mm	120	120	120	120	120	120	120	120	120	120	120	120		
	inch	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7		
Slide Face- LR X FB (Alt-1)	mm	2200 x 820	2200 x 820	2200x1000	2200x1000	2200x1000	2200x1000	2500x1000	2500x1000	3100x1200	3100x1200	3100x1200	3100x1200		
	inch	86.6x32.3	86.6x32.3	86.6x39.4	86.6x39.4	86.6x39.4	86.6x39.4	98.4x39.4	98.4x39.4	122x47.2	122x47.2	122x47.2	122x47.2		
Slide Face- LR X FB (Alt-2)	mm	X	X	2500x1000	2500x1000	2500x1000	2500x1000	2800x1000	2800x1000	3400x1200	3400x1200	3400x1200	3400x1200		
	inch	X	X	98.4x39.4	98.4x39.4	98.4x39.4	98.4x39.4	110.2x39.4	110.2x39.4	133.9x47.2	133.9x47.2	133.9x47.2	133.9x47.2		
Slide Face- LR X FB (Alt-3)	mm	X	X	X	X	2800x1000	2800x1000	3100x1000	3100x1000	X	X	X	X		
	inch	X	X	X	X	110.2x39.4	110.2x39.4	122x39.4	122x39.4	X	X	X	X		
Bolster Size- LR X FB (Alt1)	mm	2500 x 920	2500 x 920	2500x1100	2500x1100	2500x1100	2500x1100	2800x1100	2800x1100	3400x1300	3400x1300	3400x1300	3400x1300		
	inch	98.4x36.2	98.4x36.2	98.4x43.3	98.4x43.3	98.4x43.3	98.4x43.3	110.2x43.3	110.2x43.3	133.9x51.2	133.9x51.2	133.9x51.2	133.9x51.2		
Bolster Size- LR X FB (Alt2)	mm	X	X	2800x1100	2800x1100	2800x1100	2800x1100	3100x1100	3100x1100	3700x1300	3700x1300	3700x1300	3700x1300		
	inch	X	X	110.2x43.3	110.2x43.3	110.2x43.3	110.2x43.3	122x43.3	122x43.3	145.7x51.2	145.7x51.2	145.7x51.2	145.7x51.2		
Bolster Size- LR X FB (Alt3)	mm	X	X	X	X	3100x1100	3100x1100	3400x1100	3400x1100	X	X	X	X		
	inch	X	X	X	X	122x43.3	122x43.3	133.9x43.3	133.9x43.3	X	X	X	X		
Side Opening (M x N)	mm	820 x 460	820 x 460	820x460	820x460	1000x550	1000x550	1000x550	1000x550	1200 x 700	1200 x 700	1200 x 700	1200 x 700		
	inch	32.3x18.1	32.3x18.1	32.3x18.1	32.3x18.1	39.4x21.6	39.4x21.6	39.4x21.6	39.4x21.6	47.2x27.5	47.2x27.5	47.2x27.5	47.2x27.5		
Main Motor Power	kW	18.5	18.5	22	22	30	30	37	37	45	45	55	55		
	HP	25	25	30	30	40	40	50	50	60	60	75	75		
Slide Adjustment Motor	kW	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2		
	HP	2	2	2	2	2	2	2	2	3	3	3	3		
Die Cushion Capacity*	kN	160	200	200	280	200	280	280	400	280	400	280	400		
Die Cushion Stroke*	mm	125	125	125	125	150	150	150	150	150	150	150	150		
	inch	4.9	4.9	4.9	4.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9		
Die Cushion Pad Size*	mm	1600x650	1600x650	1600x700	1600x700	1600x700	1600x700	1600x700	1600x700	1600x700	1600x700	1600x700	1600x700		
	inch	63x25.5	63x25.5	63x27.6	63x27.6	63x27.6	63x27.6	63x27.6	63x27.6	63x27.6	63x27.6	63x27.6	63x27.6		
Working Height (H) (Press mounted on floor) (Approx.)	Alt.1	mm	1250	1250	1300	1300	1300	1300	1500	1500	1750	1750	2000	2000	
		inch	49.2	49.2	51.2	51.2	51.2	51.2	59	59	68.9	68.9	78.7	78.7	
		mm	X	X	1400	1400	1400	1400	1600	1600	1850	1850	2100	2100	
	Alt.2	inch	X	X	55.1	55.1	55.1	55.1	63.0	63.0	72.8	72.8	82.7	82.7	
		mm	X	X	X	X	1500	1500	1700	1700	X	X	X	X	
		inch	X	X	X	X	59.1	59.1	66.9	66.9	X	X	X	X	
Press Height with vibromounts (C) (Approx.)	Alt1	mm	5000	5000	5250	5250	5500	5500	5750	5750	6500	6500	7500	7500	
		inch	197	197	207	207	217	217	226	226	256	256	295	295	
		mm	X	X	5500	5500	5750	5750	6000	6000	6750	6750	7750	7750	
	Alt2	inch	X	X	217	217	226	226	236	236	266	266	305	305	
		mm	X	X	X	X	6000	6000	6250	6250	X	X	X	X	
		inch	X	X	X	X	236	236	246	246	X	X	X	X	
Foot Size (AxB) (Approx.)	Alt.1	mm	3350x2100	3350x2100	3350x2100	3350x2100	3350x2100	3350x2100	3650x2100	3650x2100	4425x2200	4425x2200	4525x2200	4525x2200	
		inch	131.9x82.7	131.9x82.7	131.9x82.7	131.9x82.7	131.9x82.7	131.9x82.7	131.9x82.7	143.7x82.7	143.7x82.7	174.2x86.6	174.2x86.6	178.1x86.6	178.1x86.6
		mm	X	X	3650x2100	3650x2100	3650x2100	3650x2100	3950x2100	3950x2100	4725x2200	4725x2200	4825x2200	4825x2200	
	Alt.2	inch	X	X	143.7x82.7	143.7x82.7	143.7x82.7	143.7x82.7	155.5x82.7	155.5x82.7	186.0x86.6	186.0x86.6	190.0x86.6	190.0x86.6	
		mm	X	X	X	X	3950x2100	3950x2100	4250x2100	4250x2100	X	X	X	X	
		inch	X	X	X	X	155.5x82.7	155.5x82.7	167.3x82.7	167.3x82.7	X	X	X	X	
Required Floor space (DxE)(Approx.)	Alt.1	mm	3750x3500	3750x3500	3750x3500	3750x3500	3750x3500	3750x3500	4100x3500	4100x3500	4900x4000	4900x4000	5000x4000	5000x4000	
		inch	147.6x137.8	147.6x137.8	147.6x137.8	147.6x137.8	147.6x137.8	147.6x137.8	147.6x137.8	161.4x137.8	161.4x137.8	192.9x157.5	192.9x157.5	196.9x157.5	196.9x157.5
		mm	X	X	4000x3500	4000x3500	4000x3500	4000x3500	4400x3500	4400x3500	5200x4000	5200x4000	5300x4000	5300x4000	
	Alt.2	inch	X	X	157.5x137.8	157.5x137.8	157.5x137.8	157.5x137.8	173.2x137.8	173.2x137.8	204.7x157.5	204.7x157.5	208.7x157.5	208.7x157.5	
		mm	X	X	X	X	4350x3500	4350x3500	4700x3500	4700x3500	X	X	X	X	
		inch	X	X	X	X	171.3x137.8	171.3x137.8	185.0x137.8	185.0x137.8	X	X	X	X	

\* Optional features  
 # Single stroke working is recommended up to mid SPM only.  
 Machines are manufactured as per SI Units. Dimensions in FPS are approximate and given only for reference.

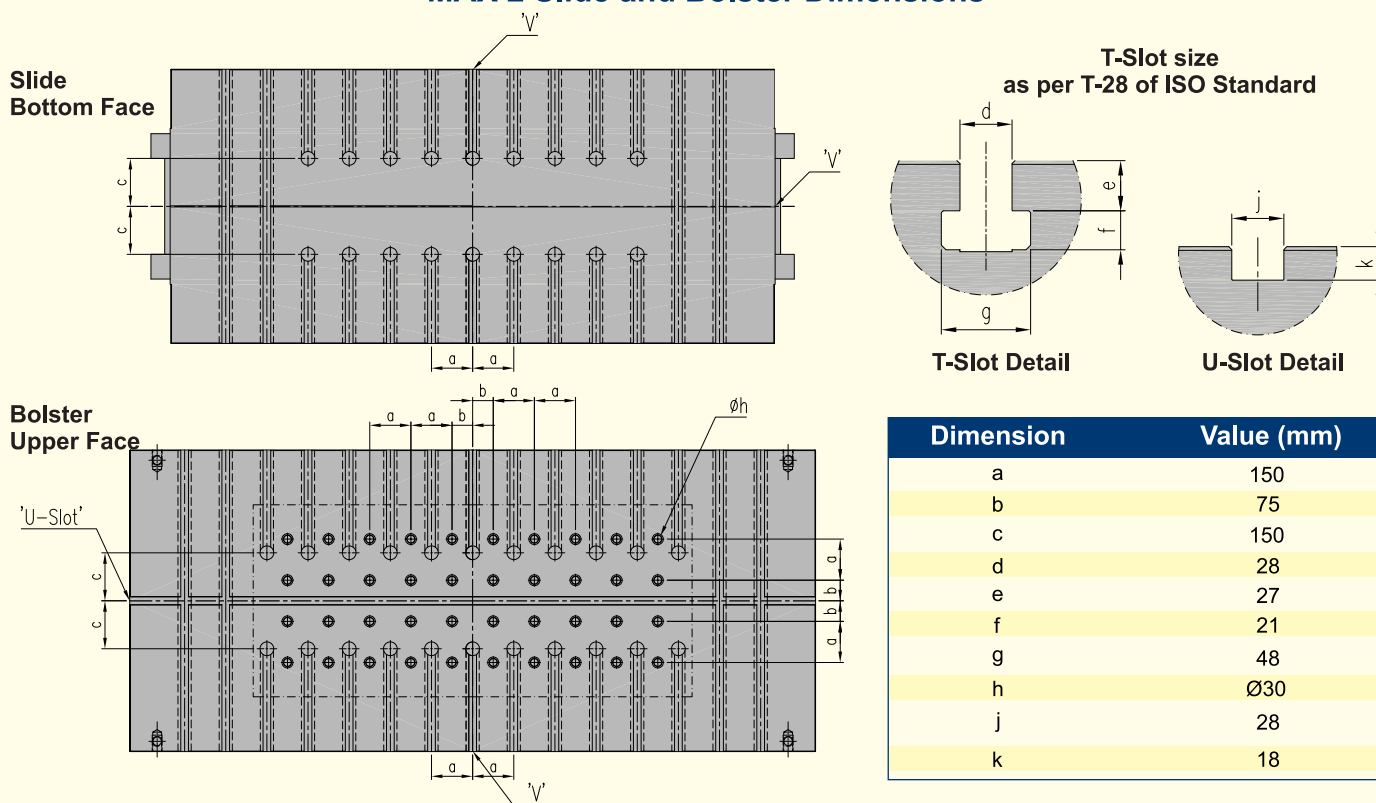
## Standard Accessories

- Pneumatic Counter Balance Cylinder
- Hydraulic Overload Protection
- Motorised Slide Adjustment
- Automatic Motorised Lubrication
- Operator Panel with PLC & HMI
- Pneumatic Clutch & Brake
- Emergency Stop buttons
- Digital Shut Height Indicator
- Portable Two Hand Operator Stand
- Production Counter
- Dual Safeties
- Die Area Light
- Safety Block
- Photo Electric Guards
- Rotary Cam Limit Switches (6 Nos.)

## Optional Accessories

- Pneumatic Die Cushion
- Tonnage Monitor
- Quick Die Change System
- Anti Vibration Mounts
- Variable Speed through AC Inverter
- Safeties conform to CE/OSHA/CSA
- Die Protection System
- Mechanical Knock Out
- Wet Clutch
- Tower Lights
- Pneumatic Die Cushion (Adjustable Stroke)
- Fixed type Side Safety Guards
- Direct and Cam Operated Air Sockets
- Digital Crank Angle Indicator on HMI
- Programmable Soft Cams (8 Nos.)
- Misfeed Detection Socket
- Feedline Equipment (De-Coiler, Straightener, Feeder)
- Automated Component Transfer System (ACTS)

## MAX 2 Slide and Bolster Dimensions



## Wide Range of Presses

Servo Presses • Transfer Presses • Progressive Presses • High Speed Presses • Hot Stamping & Hot Forming Hydraulic Presses  
 Standard Straight Sided Mechanical & Hydraulic Presses • Blanking Lines • Tandem Press Lines - Mechanical & Hydraulic  
 Cold Forging Presses • Tryout & Die Spotting Presses • Gap Frame & Ring Frame Power Presses • Special Purpose Presses



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Some of the accessories / fitments shown in the reference photograph may not be part of Standard equipment supplied.  
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 Details given in this Brochure are indicative & may change.