ISGEC

PRESSES

MECHANICAL • HYDRAULIC • SERVO

Servo Mechanical Presses

MAS Series

315T - 3150T

Safeties conform to:
CE (EN-16092 : 2018)
OSHA 1910.217
CSA-Z142
NR-12

ISO 9001:2015
ISO 14001:2015
OHSAS 18001 :2007

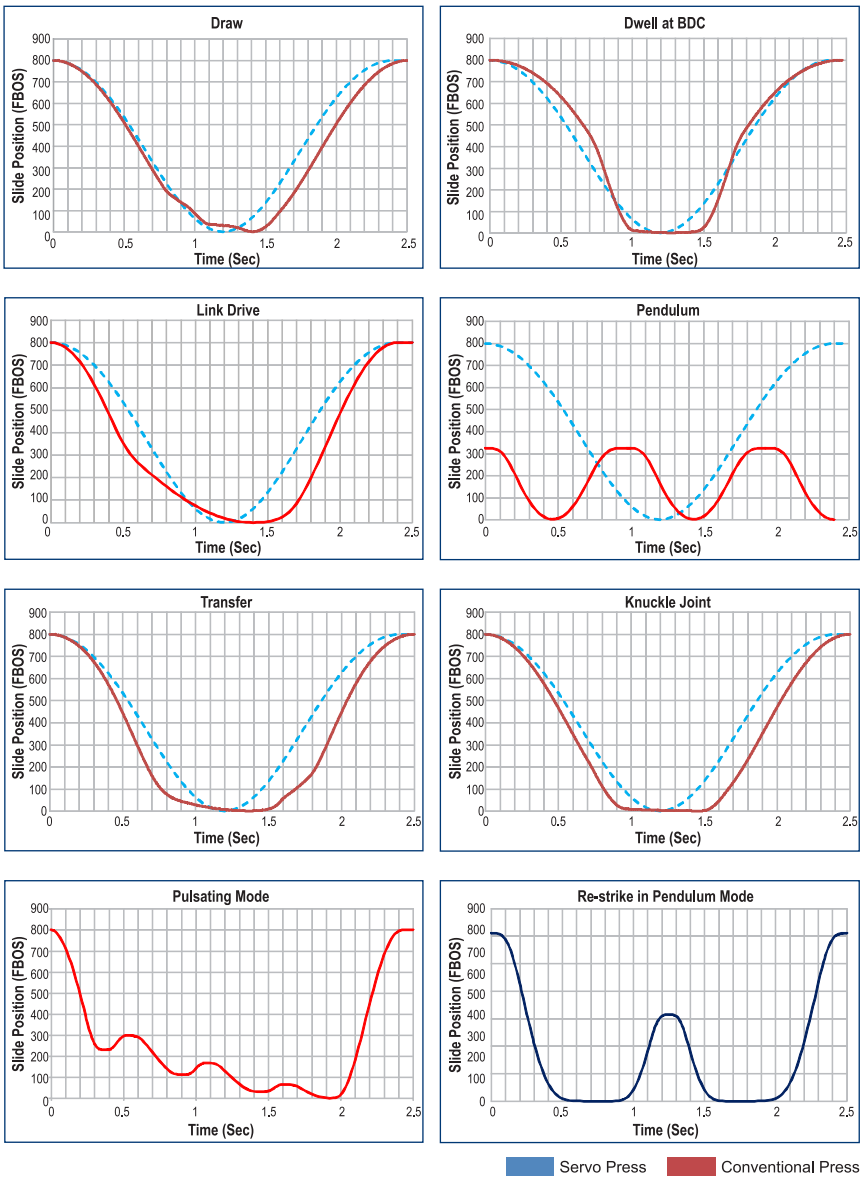
Output - Versatility Redefined

High Productivity • High Position Accuracy • Energy Efficient

ISGEC MAS Series - 315T to 3150T

Versatility-Freely Programmable Kinematics

- Slide Kinematics quickly and easily adaptable to parameters of Process, Die, Automation System and eliminates adverse effects of motion limitations of conventional press
- Wide range of Tryout functions in production Press
- User Programmable Stroke Heights and Motion Sequences
- Motion Profile Adjustment to suit part transport process with Progressive & Transfer Dies

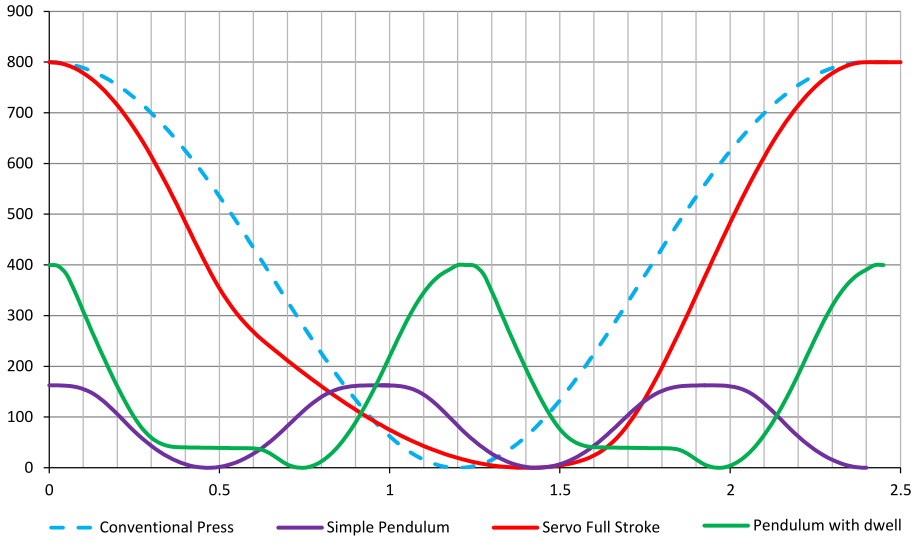


Increased Output

- Pendulum Operating Mode enables programmable slide stroke heights. Reversing movement of torque motor means that Eccentric Drive has an oscillating motion and alternates between forward in one stroke and backward in the next stroke.
- This significantly increases output and energy efficiency.
- User programmable parameters of time & distance sequences allow possibility to integrate several processes in press cycle resulting in higher output.
- Pendulum Operating Mode enables higher output.
- Individual part curves stored in Die database and quickly available for future use.

Operational Advantages

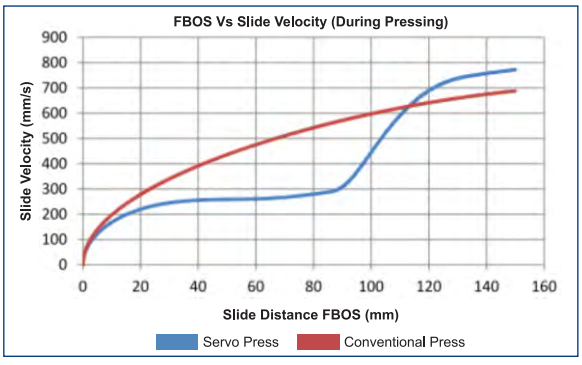
Servo Press Motion Profile

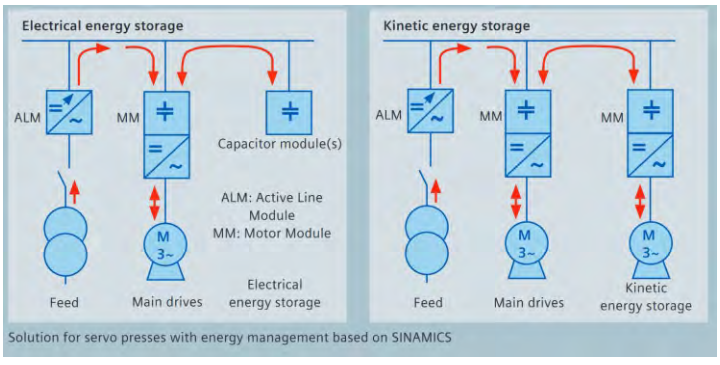


- Increased part quality and Die life due to controlled motion sequence optimally adapted to process requirements.
- Reduced rejections & less rework.
- Reduced snap through loads and spring back.
- Easier maintenance and reduced maintenance cost compared to conventional mechanical presses due to fewer mechanical components.
- Reduced Stamping Noise and vibrations due to precise control of speed.

Energy Management

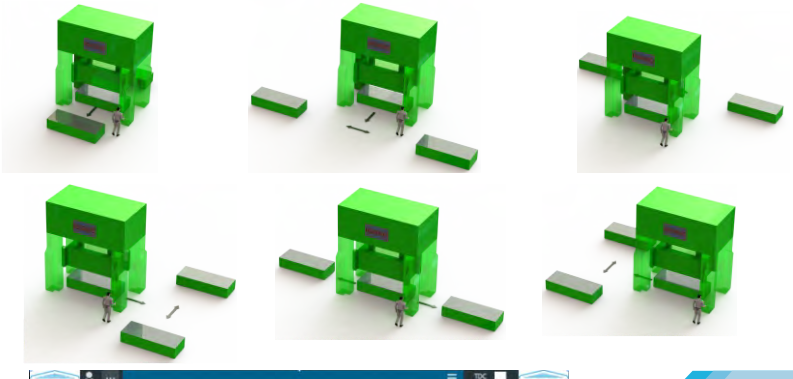
In contrast to conventional Hydraulic & Mechanical Presses wherein energy sources are continuously consuming power, Servo Presses use regenerative feature thus storing energy during braking & deceleration mode. This stored energy is subsequently utilised during acceleration mode resulting in energy efficiency and reduced power consumption.

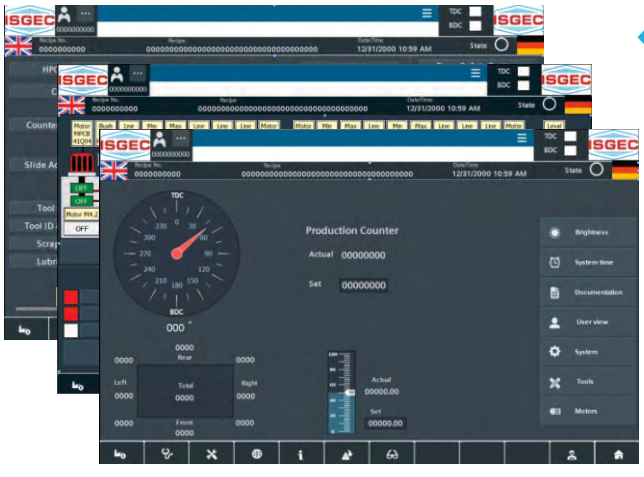




Quick Die Change System

- Electrically driven Moving Bolsters with alternative options of movement for Quick Die Change and higher productivity.
- Die Centering Slots on Bolster Plate for Quick Die Location.
- T-Slots as per JIS, JIC & DIN depending upon user's requirement.
- Automatic or Semi Automatic Die Change feature available as optional.
- On demand 'Hydraulically Operated Manually Positioned' or 'Automatic' Die Clamps provided.





Ease of Operation & Interface

- Programmable Logic Controller with user-friendly Operator Interface has operator Screens. HMI (Human Machine Interface) with Diagnostic features developed by constant improvements through feedback from Press users.
- On demand interfacing hardware for reliable interface with Automation.
- Remote online diagnosis feature provided on demand
- Complete Project Management including Interface with Automation & Dies provided.

Safeties as per International Practices

- Immediate Press stoppage due to absence of high inertia of drive mechanism as compared with conventional mechanical presses.
- Inbuilt Servo lock in Servo Motor.
- Spring actuated hydraulically released safety brake for dual safety.

Technical Specifications of MAS-TR Series 630T-3500T

TWO POINT SUSPENSION ECCENTRIC DRIVE MECHANICAL PRESS - MAS-TR-2E						
Model No.		**MAS-TR-2E-630**	**MAS-TR-2E-800**	**MAS-TR-2E-1000**	**MAS-TR-2E-1250**	**MAS-TR-2E-1600**
Maximum capacity	kN	6300	8000	10000	12500	16000
Strokes Per Minute (Variable)	SPM	3-30	3-30	3-30	3-30	3-30
Stroke Length (fixed)	mm	600	600	600	600	600
Shut Height (SDAU)	mm	1100	1100	1100	1200	1200
Slide Adjustment (Motorised)	mm	250	250	300	300	300
Slide & Bolster Face - LR x FB (Alt-1)	mm	3700x1600	4000x1900	4900x1900	4900x1900	5200x1900
Slide & Bolster Face - LR x FB (Alt-2)	mm	4000x1600	4300x1900	5200x1900	5200x1900	5500x1900
Slide & Bolster Face - LR x FB (Alt-3)	mm	4300x1600	4600x1900	5500x1900	5500x1900	5800x1900

FOUR POINT SUSPENSION ECCENTRIC DRIVE MECHANICAL PRESS - MAS-TR-4E										
Model No.		**MAS-TR-4E 630**	**MAS-TR-4E 800**	**MAS-TR-4E 000**	**MAS-TR-4E 1250**	**MAS-TR-4E 1600**	**MAS-TR-4E 2000**	**MAS-TR-4E 2500**	**MAS-TR-4E 3150**	**MAS-TR-4E 3500**
Maximum capacity	kN	6300	8000	10000	12500	16000	20000	25000	31500	35000
Strokes Per Minute (Variable)	SPM	3-30	3-30	3-30	3-30	3-30	3-28	3-25	3-25	3-25
Stroke Length (fixed)	mm	600/800	600/800	600/800	600/800	800	800	800	800	800
Shut Height (SDAU)	mm	1100	1100	1100	1400	1500	1500	1500	1500	1500
Slide Adjustment (Motorised)	mm	250	250	300	300	400	400	400	400	400
Slide & Bolster Face - LR x FB (Alt-1)	mm	3700x1900	4000x2200	4600x2200	4900x2200	5500x2500	5500x2500	5800x2500	6100x2500	6100x2500
Slide & Bolster Face - LR x FB (Alt-2)	mm	4000x2200	4300x2200	4900x2200	5200x2200	6100x2500	6100x2500	6100x2500	6700x2800	6700x2800
Slide & Bolster Face - LR x FB (Alt-3)	mm	4300x2200	4600x2200	5200x2200	5500x2200	6400x2800	6400x2800	6700x2800	7300x3050	7300x3050
Slide & Bolster Face - LR x FB (Alt-4)	mm	4600x2200	4900x2200	5500x2200	5800x2200	6700x2800	6700x2800	7300x2800	7600x3050	7600x3050

Machines are manufactured as per SI Units.
Specifications are subject to change without notice

* Optional Features

Technical Specifications of MAS-T Series 315T-2000T

TWO POINT SUSPENSION ECCENTRIC DRIVE MECHANICAL PRESS - MAS-T-2E								
Model No.		**MAS-T-2E-315**	**MAS-T-2E-400**	**MAS-T-2E-500**	**MAS-T-2E-630**	**MAS-T-2E-800**	**MAS-T-2E-1000**	**MAS-T-2E-1250**
Maximum capacity	kN	3150	4000	5000	6300	8000	10000	12500
Strokes Per Minute (Variable)	SPM	3-24	3-24	3-24	3-24	3-24	3-24	3-24
Stroke Length (fixed)	mm	600 / 800	600	600	600	600	600	600
Shut Height (SDAU)	mm	800 / 1100	800 / 1100	800 / 1100	800 / 1100	800 / 1100	1100 / 1400	1100 / 1400
Slide Adjustment (Motorised)	mm	200 / 300	300	300	300	400	400	400
Slide & Bolster Face - LR x FB (Alt-1)	mm	2500x1600	2500x1600	2800x1600	2800x1600	3100x1600	3100x1900	3400x1900
Slide & Bolster Face - LR x FB (Alt-2)	mm	2800x1600	2800x1600	3100x1600	3100x1600	3400x1600	3400x1900	3700x1900
Slide & Bolster Face - LR x FB (Alt-3)	mm	3100x1600	3100x1600	3400x1600	3400x1600	3700x1600	3700x1900	4000x1900
Die Cushion Capacity*	kN	500	630	800	1000	1200	1600	2000
Die Cushion Stroke*	mm	220	220	220	220	220	220	220
Die Cushion Pad Size (Alt-1)	mm	2050x1150	2050x1150	2350x1150	2350x1150	2650x1150	2650x1450	2950x1450
Die Cushion Pad Size (Alt-2)	mm	2350x1150	2350x1150	2650x1150	2650x1150	2950x1150	2950x1450	3250x1450
Die Cushion Pad Size (Alt-3)	mm	2650x1150	2650x1150	2950x1150	2950x1150	3250x1150	3250x1450	3550x1450

FOUR POINT SUSPENSION ECCENTRIC DRIVE MECHANICAL PRESS - MAS-T-4E									
Model No.		**MAS-T-4E 400**	**MAS-T-4E 500**	**MAS-T-4E 630**	**MAS-T-4E 800**	**MAS-T-4E 1000**	**MAS-T-4E 1250**	**MAS-T-4E 1600**	**MAS-T-4E 2000**	**MAS-T-4E 2500**
Maximum capacity	kN	4000	5000	6300	8000	10000	12500	16000	20000	20000
Strokes Per Minute (Variable)	SPM	3-24	3-24	3-24	3-24	3-24	3-24	3-24	3-24	3-24
Stroke Length (fixed)	mm	600	600	600	600	600	600	600	600	600
Shut Height (SDAU)	mm	800 / 1100	800 / 1100	800 / 1100	800 / 1100	1100 / 1400	1100 / 1400	1100 / 1500	1100 / 1400	1100 / 1400
Slide Adjustment (Motorised)	mm	300	300	300 / 400	400	400	400	400	400	400
Slide & Bolster Face - LR x FB (Alt-1)	mm	2800x1900	3100 x 1900	3100 x 1900	3100 x 1900	3400x2200	3400x2200	3700 x 2200	4000x2500	4000x2500
Slide & Bolster Face - LR x FB (Alt-2)	mm	3100x1900	3400 x 1900	3400 x 2200	3700x2200	3700x2200	4000x2500	4300x2500	4300x2500	4300x2500
Slide & Bolster Face - LR x FB (Alt-3)	mm	3700x2200	3700 x 2200	4000 x 2500	4000x2500	4000x2500	4300x2500	4600x2500	4600x2500	4600x2500
Die Cushion Capacity*	kN	630	800	1000	1200	1600	2000	2500	3200	4000
Die Cushion Stroke*	mm	220	220	220	220	220	220	220	220	220
Die Cushion Pad Size (Alt-1)	mm	2350x1450	2650 x 1450	2650 x 1450	2650 x 1450	2950x1750	2950x1750	3250x1750	3250x1750	3250x1750
Die Cushion Pad Size (Alt-2)	mm	2650x1450	2950 x 1450	2950 x 1750	3250x1750	3250x1750	3250x1750	3250x1750	3250x1750	3250x1750
Die Cushion Pad Size (Alt-3)	mm	2950x1750	2950 x 1750	3250 x 1750	3250x1750	3250x1750	3550x1750	3550x1750	3550x1750	3550x1750

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* Optional Features

ISGEC MAS Series - 315T to 3150T

Technical Specifications of MAS-P Series 315T-1250T

TWO POINT SUSPENSION ECCENTRIC DRIVE MECHANICAL PRESS - MAS-P-2E								
Model No.		**MAS-P-2E-315**	**MAS-P-2E-400**	**MAS-P-2E-500**	**MAS-P-2E-630**	**MAS-P-2E-800**	**MAS-P-2E-1000**	**MAS-P-2E-1250**
Maximum capacity	kN	3150	4000	5000	6300	8000	10000	12500
Suspension Points	No.	2	2	2	2	2	2	2
Speed (Variable)	SPM	3-90/3-70	3-90/3-70	3-70	3-70	3-70	3-70	3-50
Stroke Length (fixed)	mm	200/300	200/300	200/250/300	200/250/300	200/250/300	200/250/300	250/300/400
Shut Height (SDAU)	mm	600	700	700	700	800	800	1000
Slide Adjustment (Motorised)	mm	200	250	250	250	300	300	300
Slide & Bolster Face - LR x FB (Alt-1)	mm	2200x1300	2500x1600	2500x1600	2800x1600	3100x1600	3100x1600	3100x1600
Slide & Bolster Face - LR x FB (Alt-2)	mm	2500x1300	2800x1600	2800x1600	3100x1600	3400x1600	3400x1600	3400x1600
Slide & Bolster Face - LR x FB (Alt-3)	mm	2800x1300	3100x1600	3100x1600	3400x1600	3700x1600	3700x1600	3700x1600
Slide & Bolster Face - LR x FB (Alt-4)	mm	3100x1300	3400x1600	3400x1600	3700x1600	4000x1600	4000x1600	4000x1600
Opening in Uprights (Front to Back)	mm	800	1100	1200	1300	1400	1500	1500

Machines are manufactured as per SI Units.
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* Optional Features

Standard Accessories

- High Torque Servo Motor with Controls
- Safety Brakes
- Energy Storage & Management System
- Programmable Logic Controller
- Dual Check Safety Electrical Circuit
- Production Counters (Total Batch/Shift) on HMI
- Counter Balance Cylinder
- Hydraulic Overload Protection
- Centralised Re-circulating Automatic Oil Lubrication System
- User-friendly Touch Screen Interface
- Motorised Slide Adjustment
- Emergency Stop Buttons
- LED Die Area lights
- Portable Two Hand Operator Stand
- Crank Angle Indicators
- Maintenance Tool Kit
- 6 Nos. Preset Motion Profiles
- Safety Blocks

Optional Accessories

- Die Clamps for Quick Die Change
- Programmable Cam Switches
- Die Cushion
- Electronic Force Monitoring / Process Monitoring with Signature Analysis
- Anti Vibration Mounts
- Bearing Temperature Monitoring System
- Higher Hydraulic Overload Stroke
- Compliance with CE/OSHA Safety Standards
- Link Drive option in Servo Press
- Automatic Die Change System
- Slide Locking Device
- Moving Bolster with T-Track
- Die Automation Control
- Scrap Chute with Interlocked Opening Covers
- Photoelectric Guards on front and rear
- SCADA System
- REACH 4.0 Enable Smart Control
- Mechanical Safety Guard on Front and Rear

Front of Line & End of Line Solutions

- Destacker/Coil Line with 3-Axis Transfer system
- Robotic Auto stacking of Parts

Standard Servo Mechanical Press MAS1 & MAS2 Series 40T-630T

Productivity increased

Increased Output approx. upto 25%

Improved Part Quality

Reduced Rejection by 5%

Reduced Lubrication

Technical Specifications of MAS1 Series 40T-300T

GAP FRAME SERVO MECHANICAL PRESS - MAS1									
Tonnage	**Unit**	**40**	**63**	**80**	**110**	**160**	**200**	**250**	**300**
Models		MAS1	MAS1	MAS1	MAS1	MAS1	MAS1	MAS1	MAS1
Maximum capacity	kN	400	630	800	1100	1600	2000	2500	3000
SPM (Cranck mode)	SPM	85	80	80	70	60	50	40	30
SPM (Pendulum mode)	spm	130	120	115	110	100	90	80	60
Stroke Length (fixed)	mm	70	120	150	180	200	200	250	250
Throat	mm	225	250	310	355	400	425	475	475
Shut Height (SDAU)	mm	230	300	325	350	400/500/500	450/550/550	.600	.600
Slide Adjustment	mm	60	70	80	80	120	120	120	125
Slide Face (a x b)	mm	400x350	500x400	525x450	625x500	700x580	840x650	940x700	1100x800
Bolster Face (c x d)	mm	800x450	900x500	1000x620	1150x710	1250x800	1450x850	1450x950	1450x950
Bolster thickness (f)	mm	90	90	100	110	140	160	160	160
Height of Bolster surface from floor (without AVM pads)	mm	800	900	900	900	900	1000	1100	1200

Technical Specifications of MAS2 Series 250T-630T

GAP FRAME SERVO MECHANICAL PRESS - MAS2						
Tonnage	**unit**	**250**	**315**	**400**	**500**	**630**
Models		MAS2	MAS2	MAS2	MAS2	MAS2
Maximum capacity	kN	2500	3150	4000	5000	6300
SPM (Cranck mode)	SPM	40	35	32	30	27
SPM (Pendulum mode)	SPM	85	75	65	60	55
Stroke Length (fixed)	mm	250	300	300	350	350
Shut Height (SDAU)	mm	600	800	800	1000	1000
Slide Adjustment	mm	120	120	120	120	120
Slide Face - LR x FB (Alt-1)	mm	2200x1000	2200x1000	2500x1000	3100x1200	3100x1200
Slide Face - LR x FB (Alt-2)	mm	2500x1000	2500x1000	2800x1000	3400x1200	3400x1200
Slide Face - LR x FB (Alt-3)	mm	X	2800x1000	3100x1000	X	X
Bolster Face - LR x FB (Alt-1)	mm	2500x1100	2500x1100	2800x1100	3400x1300	3400x1300
Bolster Face - LR x FB (Alt-2)	mm	2800x1100	2800x1100	3100x1100	3700x1300	3700x1300
Bolster Face - LR x FB (Alt-3)	mm	X	3100x1100	3400x1100	X	X

Machines are manufactured as per SI Units.
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* Optional Features

Standard Accessories for Gap Frame & Monolithic Frame Presses

- Servo Motor with Controls
- Pneumatic Counter Balance Cylinders
- Hydraulic Overload Protection
- Motorized Slide Adjustment
- Automatic Forced Lubrication
- Operator Panel with PLC & HMI
- Production Counter
- Emergency Stop Buttons
- Electronic Shut Height Indicator
- Two Hand Push Button Station
- Safety Brakes
- Anti-Repeat Safety Device
- Rotary Cam Limit Switches
- Die Area lights
- Power Socket
- Photo Electric Guards
- Programmable Logic Control
- Dual Safeties
- Safety Block
- 6 Cam Box

Optional Accessories

- Pneumatic Die Cushion
- Metallic Guards & Covers
- Variable Speed through AC Inverter
- Tonnage Monitor
- Quick Die Change System
- Anti Vibration Mounts
- Auto Coil Feeding System
- Misfeed Detection Socket
- Air Outlet
- Mechanical Knock Out
- Safety Block
- Interfacing provision with Coil Feeding System
- Safeties conform to CE/OSHA
- Die Protection System
- Fixed type Side Safety Guards

Wide Range of Presses

Tandem Press Lines • Transfer Press Lines • Progressive Die Press Lines • Blanking Press Lines • High-Speed Mechanical Presses
Deep Draw Hydraulic Presses • High-Speed Hydraulic Presses • Hot Forming Press Lines • Tryout Mechanical Presses
Die Spotting/Tryout Hydraulic Presses • Refractory Press Solutions • Hot/Cold Forging Presses • Special Application Presses

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WY/Presses/MAS L/102024/04/Dtp

Some of the accessories / fitments shown in the reference photograph may not be part of Standard equipment supplied.
Isgec reserves the right to change specifications without prior notice.
Details given in this Brochure are indicative & may change.

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