

# GARNET

General catalogue mechanical presses



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## High performance and excellence in Hydraulic and mechanical presses.

HIDROGARNE has a business career that began in 1987 with the manufacture of machines solely for the Spanish market, successively we went extending through different European countries and we are currently exporting our hydraulic presses to more than 20 countries around the world.

It guarantees an experience of more than 33 years of innovation, quality and commitment to our customers.

The continuous progress during all these years places us as leaders in the manufacture of hydraulic presses.

In our new stage we have agreed to a technical-commercial and engineering collaboration with one of the most prestigious manufacturers in Europe in the manufacture of eccentric presses. They are specialized for 50 years in the manufacture of mechanical presses, automatic lines and high-performance transfer systems.

Convinced of the quality of our hydraulic presses, we have extended the manufacturing guarantee to a period of two years.

All our range of mechanical presses is designed and manufactured entirely at Europe.

We are specialized in the manufacture of mechanical presses with capacities, measurements and technical characteristics adapted to every customer needs.



# PE SERIES

The PE series mechanical presses are suitable for a wide variety of applications to industries that perform punching, stamping, cutting and deep drawing works.

They are made of S355JR steel, stabilized, and mechanized at the end of the welding process to ensure a perfect parallelism and precision. Calculated and designed with finite element software. With all this, we always guarantee our high standards of precision and quality.

The rod is built of high-strength forged steel and high-performance alloy bushings.

To guarantee perfect maintenance and operation, all our range is equipped with centralized automatic lubrication with a programmable progressive system.

## OVERLOAD AND COMPENSATION

An overload protection unit is installed to protect machine components and installed tools. A safety valve discharges the oil from the chamber when for any reason the reached set value is higher than the nominal load.

For an effective balance of the slide and the dies, the compensation is by means of two pneumatic cylinders.

## PNEUMATIC CLUTCH & BRAKE COMBINATION

The clutch-brake is electropneumatic, equipped with a double safety body solenoid valve and crossflow.

The pneumatic system includes a compensation tank, a regulator-lubricator filter, a control pressure switch, and a safety valve.

## ELECTRICAL INSTALLATION AND SAFETY

The control panel features a switch enabling the user to select the desired type of work in manual, semi-automatic or automatic position. Electrical and hydraulic manoeuvres are redundant and self-controlled. They incorporate an additional PLC for manoeuvre and safety.

Operation is carried out by low voltage two-hand push button and electric pedal.

Safety is guaranteed using lateral opening protections with level IV safety light curtains placed on the sides of the work area.

It meets and satisfies all the essential health and safety requirements in accordance with the CE standard.

The PE Series range of mechanical presses is divided into three models:

**PE MODEL:** Available with a power of 30 and 40 Tn.

The transmission between the drive shaft and the eccentric shaft is by means of a direct flywheel, there are no intermediate reductions between the drive shaft and the eccentric shaft, this system allows us higher speeds and productions. The slide is made of welded and stabilized steel with 4 ground prismatic guides.

**PE-4 MODEL:** Available with a power from 40 to 315 Tn.

The transmission between the motor shaft and the eccentric shaft is by means of a gearbox with ground gears, this system allows us to work with a high tonnage at relatively low nominal speeds.

The slide is made of welded and stabilized steel with 4 ground prismatic guides. It incorporates a base for the recovery of the excess oil from the lubrication.

Models from 160 to 315 Tn. have automatic ram adjustment.

**PE-6 MODEL:** Available with a power from 125 to 315 Tn.

The transmission between the motor shaft and the eccentric shaft is by means of a gearbox with ground gears, this system allows us to work with a high tonnage at relatively low nominal speeds.

The slide is made of welded and stabilized steel with 6 ground prismatic guides.

It incorporates a base for the recovery of the excess oil from the lubrication. Automatic ram adjustment.

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## COMPLETE PRODUCTION LINES

**On request we have complete power lines, peripherals, and turnkey project solutions available**

# PE / PE-4 Series

C type 4 guided ram mechanical presses



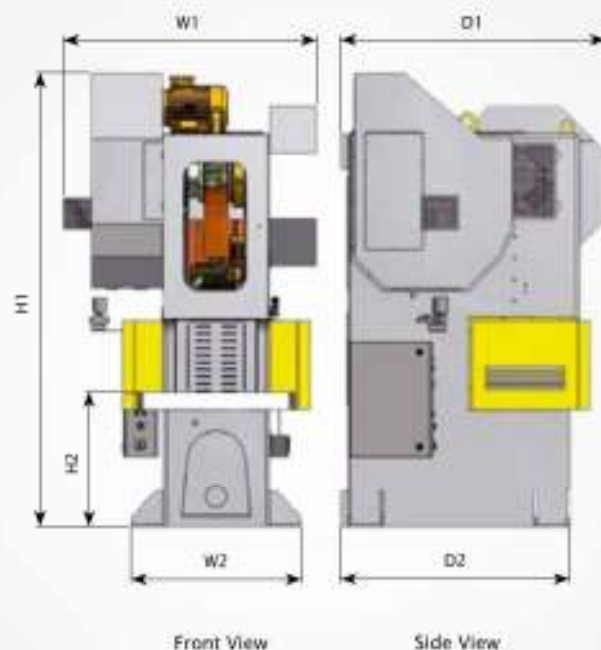


## STANDARD FEATURES

- Pneumatic Clutch & Brake Combination
- Dual Safety Valve
- Both Hands Control
- Foot Pedal Control
- Central Motorized Lubrication System
- Automatic Ram Adjustment
- Cam Limit with Proximity Switch
- Programmable Control System (PLC)
- Conformity of CE Machinery Directives
- Photocell Safety Guard
- Hydraulic Overload Protector
- Adjustable Stroke Movement
- Standard Anti-Vibration Pads
- 2 Year Warranty(\*\*)

## OPTIONAL ACCESSORIES

- Automatic ram adjustment (from 60 to 125 Tn)
- Inverte(speed variation)
- Pneumatic or Hydraulic die ejector or cushion
- Lower auxiliar table
- Strain gauge system
- NC digital display with memories



(\*) Only Between 260 Tons - 315 Tons  
 (\*\*) Normal Operating Conditions Excluding User Errors

## DIEMENSIONS

		PE 30	PE 40	PE-4 40	PE-4 60	PE-4 80	PE-4 100	PE-4 125	PE-4 160	PE-4 200	PE-4 250	PE-4 315
H1	mm	2000	2000	2200	2350	2500	2760	2870	3200	3250	3280	3460
H2	mm	670	670	670	670	700	800	800	950	950	950	950
W1	mm	1300	1400	1370	1460	1500	1640	1680	1800	2100	2100	2150
W2	mm	840	840	840	840	920	990	1000	1190	1360	1400	1450
D1	mm	1100	1300	1220	1230	1400	1630	1650	1860	2130	2200	2280
D2	mm	820	1040	1040	1070	1195	1420	1385	1610	1800	1920	2000

## TECHNICAL FEATURES

Press Capacity	ton	30	40	40	60	80	100	125	160	200	250	315
Stroke per Minute	spm	125	125	60	60	60	50	50	45	40	40	35
Nominal Tonnage Height	mm	3,5	4	4	4,5	5	5,5	5,5	6	6,5	7	7,5
Stroke Adjustment	mm	10-75	10-90	10-90	10-100	10-115	10-135	10-135	20-150	20-170	20-180	20-200
*Max. Closed Mould Height	mm	225	250	250	270	285	315	315	350	430	420	400
Table - Ram Distance	mm	300	340	340	370	400	450	450	500	600	600	600
Ram Adjustment	mm	50	50	50	50	50	60	60	70	80	80	90
Table Dimension	mm	360x560	440x640	440x640	470x700	500x750	560x860	600x900	700x1100	800x1200	900x1200	900x1200
Ram Dimension	mm	260x340	280x380	280x380	310x410	340x440	420x520	315x550	370x620	400x700	400x700	400x700
Diameter of Table Hole	mm	140	170	170	190	220	250	250	280	300	310	320
Diameter of Ram Hold	mm	35	40	40	40	45	50	50	55	60	65	70
Throat Depth	mm	180	220	220	235	250	280	300	350	400	450	450
Motor Power	kW	2,2	3	3	4	5,5	7,5	11	11	15	18,5	22

\* Ram at B.D.C., Ram Adjustment is Up.

# PE-6 Series

C type 6 guided ram mechanical presses

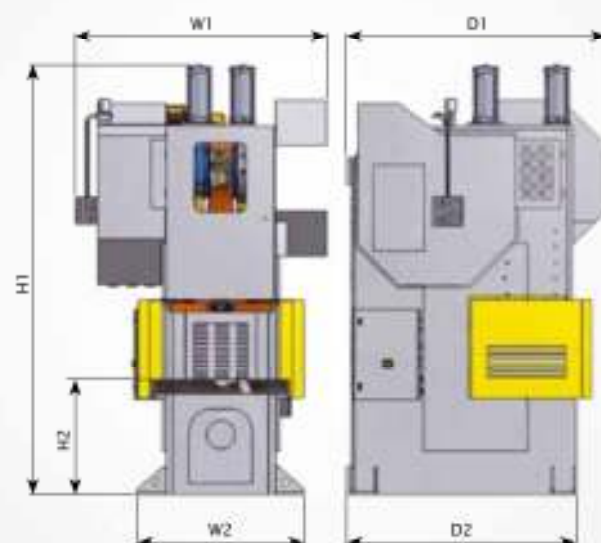


## STANDARD FEATURES

- Pneumatic Clutch & Brake Combination
- Dual Safety Valve
- Both Hands Control
- Foot Pedal Control
- Central Motorized Lubrication System
- Gears in Oil Tank
- Automatic Ram Adjustment
- Cam Limit with Proximity Switch
- Programmable Control System (PLC)
- Conformity of CE Machinery Directives
- Photocell Safety Guard
- Hydraulic Overload Protecto
- Adjustable Stroke Movement
- Pneumatic Balancing Cylinders
- Standard Anti-Vibration Pads
- 2 Year Warranty

## OPTIONAL ACCESSORIES

- Automatic ram adjustment (from 60 to 125 Tn)
- Inverter (speed variation)
- Pneumatic or Hydraulic cushion or ejector
- Lower auxiliar table
- Strain gauge system
- NC digital display with memories



Front View

Side View

(\*) Normal Operating Conditions Excluding User Errors

## DIMENSIONS

		PE-6 125	PE-6 160	PE-6 200	PE-6 250	PE-6 315
H1	mm	3150	3350	3750	3750	3800
H2	mm	900	920	1000	1000	1000
W1	mm	1760	1950	2200	2200	2200
W2	mm	1170	1310	1450	1450	1450
D1	mm	1800	1950	2280	2270	2270
D2	mm	1550	1650	1940	2000	2000

## TECHNICAL FEATURES

Press Capacity	ton	125	160	200	250	315
Stroke per Minute	spm	55	50	45	45	40
Nominal Tonnage Height	mm	5,5	6,5	7	7,5	7,5
Stroke Adjustment	mm	10-135	20-150	20-170	20-180	20-200
*Max. Closed Mould Height	mm	315	350	430	420	400
Table - Ram Distance	mm	450	500	600	600	600
Ram Adjustment	mm	60	70	80	80	90
Table Dimension	mm	650x1000	700x1100	800x1200	900x1200	900x1200
Ram Dimension	mm	460x700	520x700	550x760	600x900	620x900
Diameter of Table Hole	mm	260	280	300	310	320
Diameter of Ram Hole	mm	50	55	60	65	70
Throat Depth	mm	325	350	400	450	450
Motor Power	kW	11	11	15	18,5	22

\* Ram at B.D.C., Ram Adjustment is Up.

# PM SERIES

The double stanchion presses PM series are suitable for a wide variety of applications to industries such as automotive, aerospace, rail and many more related to metal forming.

They are double reduction presses, with one or two connecting rods. They are made of S355JR steel, stabilized and machined at the end of the welding process to guarantee perfect parallelism and precision. Calculated and designed with finite element software. With all this, we always guarantee our high standards of precision and quality.

The rod is built of high-strength forged steel and high-performance alloy bushings.

To guarantee a perfect maintenance and operation, all our range is equipped with centralized automatic lubrication with a programmable progressive system.

Designed with a complex system of eccentric gears with opposite rotation that allows a double reduction in speed and long strokes. High energy is also obtained at very low nominal speeds, suitable for drawing operations.

The dimensions of the heights of the prismatic and sliding guides are to offer maximum rigidity facing the high demands, limiting the deformation of the work surfaces to minimum values.

## OVERLOAD AND COMPENSATION

An overload protection unit is installed to protect machine components and installed tools. A safety valve discharges the oil from the chamber when for any reason the reached set value is higher than the nominal load.

For an effective balance of the slide and the dies, the compensation is by means of two pneumatic cylinders.

## PNEUMATIC CLUTCH & BRAKE COMBINATION

The clutch-brake is electropneumatic, equipped with a double safety body solenoid valve and crossflow.

The pneumatic system includes a compensation tank, a regulator-lubricator filter, a control pressure switch, and a safety valve.

## ELECTRICAL INSTALLATION AND SAFETY

The control panel features a switch enabling the user to select the desired type of work in manual, semi-automatic or automatic position. Electrical and hydraulic manoeuvres are redundant and self-controlled. They incorporate an additional PLC for manoeuvre and safety.

Operation is carried out by low voltage two-hand push button and electric pedal.

Safety is guaranteed using lateral opening protections with level IV safety light curtains placed on the sides of the work area.

It meets and satisfies all the essential health and safety requirements in accordance with the CE standard.

The PM Series range of mechanical presses is divided into four models:

**PMF MODEL:** Available with a power from 100 to 400 Tn. The slide is with 6 prismatic guides. They are double reduction with one connecting rod and fixed stroke.

**PMV MODEL:** Available with a power from 100 to 400 Tn. The slide is with 6 prismatic guides. They are double reduction with one connecting rod and variable stroke.

**PMF2 MODEL:** Available with a power from 300 to 630 Tn. The slide is with 6 prismatic guides. They are double reduction with double connecting rod and fixed stroke.

**PMF 2L MODEL:** Available with a power from 300 to 630 Tn. The slide is with 6 prismatic guides. They are double reduction with double connecting rod and fixed stroke and large dimension tables.

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## COMPLETE PRODUCTION LINES

On request we have complete power lines, peripherals, and turnkey project solutions available.



# PMF Series

H type one point mechanical presses

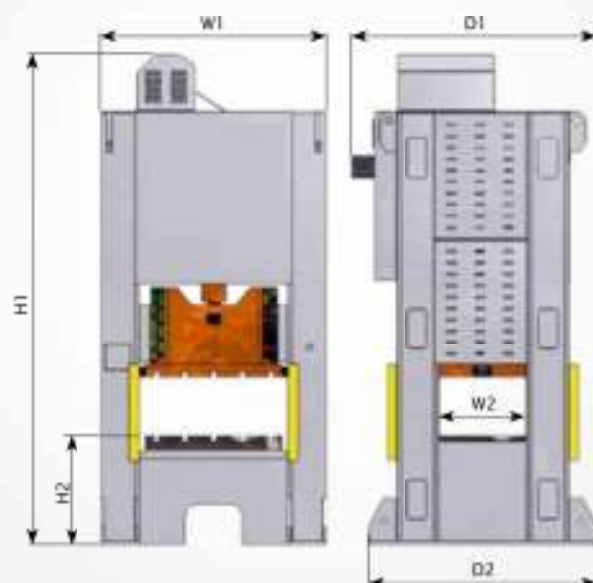


## STANDARD FEATURES

- Pneumatic Clutch & Brake Combination
- Dual Safety Valve
- Both Hands Control
- Foot Pedal Control
- Progressive Motorized Lubrication System
- Gears in Oil Tank
- Automatic Ram Adjustment
- Shut Height Indicator
- Mechanical Rotary Cam Limit Switch (4) Array
- Magnetic Cam Limit Switch
- Programmable Control System (PLC)
- Touch-Operated Monitor
- Conformity of CE Machinery Directives
- Double Sided Photocell Safety Guard
- Hydraulic Overload Protector
- Safety Block
- Separated Plano Type Electric Pane
- Pneumatic Balancing Cylinders
- Rubber Anti-Vibration Pads
- 2 Year Warranty (\*)

## OPTIONAL ACCESSORIES

- Inverter (speed variation)
- Pneumatic or hydraulic ejector
- Pneumatic or hydraulic Die Cushion
- Lower auxiliar table
- Strain gauge system
- NC digital display with memories



Front View

Side View

(\*) Normal Operating Conditions Excluding User Errors

## DIMENSIONS

		PMF 100	PMF 160	PMF 200	PMF 250	PMF 300	PMF 400
H1	mm	4300	4800	4950	5050	5100	5550
H2	mm	900	950	1000	1000	1000	1100
W1	mm	1800	1950	2050	2100	2250	2350
W2	mm	600	700	700	800	800	800
D1	mm	2050	2200	2250	2200	2400	2500
D2	mm	1850	1900	2000	2100	2150	2150

## TECHNICAL FEATURES

Press Capacity	ton	100	160	200	250	300	400
Stroke per Minute	spm	60	50	40	40	40	30
Nominal Tonnage Height	mm	5,5	6	6,5	7	7,5	7,5
Stroke Adjustment	mm	150	150	150	150	200	200
*Max. Closed Mould Height	mm	350	400	450	500	500	500
Table - Ram Distance	mm	500	550	600	650	700	700
Ram Adjustment	mm	0-80	0-100	0-120	0-120	0-120	0-140
Table Dimension	mm	900x1000	1000x1000	1000x1200	1100x1200	1100x1300	1100x1300
Ram Dimension	mm	900x1000	1000x1000	1000x1200	1100x1200	1100x1300	1100x1300
Motor Power	kW	11	15	18,5	18,5	22	30

\*Ram at B.D.C., Ram Adjustment is Up.

# PMV Series

H type one point mechanical presses variable stroke

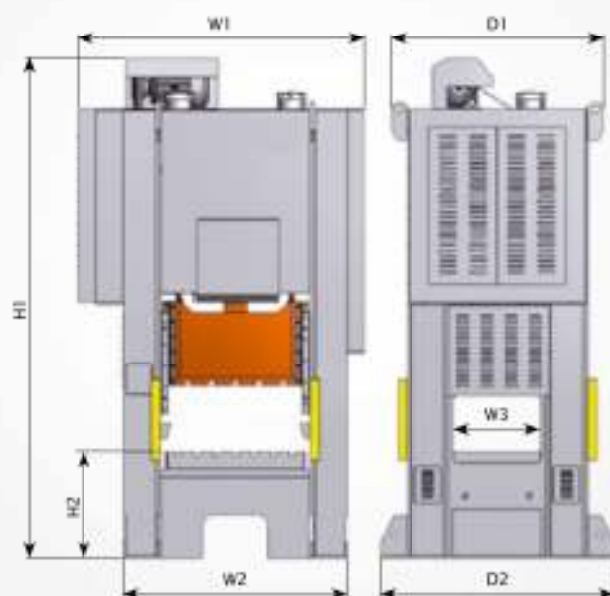


## STANDARD FEATURES

- Pneumatic Clutch & Brake Combination
- Dual Safety Valve
- Both Hands Control
- Foot Pedal Control
- Progressive Motorized Lubrication System
- Gears in Oil Tank
- Automatic Ram Adjustment
- Digital Ruler for Ram Adjusting
- Adjustable Stroke Movement
- Mechanical Rotary Cam Limit Switch (4 Array)
- Magnetic Cam Limit Switch
- Programmable Control System (PLC)
- Touch-Operated Monitor
- Conformity of CE Machinery Directives
- Double Sided Photocell Safety Guard
- Hydraulic Overload Protector
- Safety Block
- Separated Plano Type Electric Panel
- Pneumatic Balancing Cylinders
- Rubber Anti-Vibration Pads
- \*2 Year Warranty(\*)

## OPTIONAL ACCESSORIES

- Inverter (speed variation)
- Pneumatic or hydraulic ejector or die cushion
- Lower auxiliar table
- Strain gauge system
- NC digital display with memories



Front View

Side View

(\*) Normal Operating Conditions Excluding User Errors

## DIMENSIONS

		PMV 100	PMV 160	PMV 200	PMV 250	PMV 300	PMV 400
H1	mm	4200	4350	4700	4750	5000	5200
H2	mm	900	950	1000	1000	1000	1100
W1	mm	2250	2450	2550	2700	2800	2850
W2	mm	1700	1800	2000	2000	2100	2100
W3	mm	600	700	700	800	800	800
D1	mm	1950	2000	2100	2150	2150	2200
D2	mm	1950	2050	2050	2150	2150	2150

## TECHNICAL FEATURES

Press Capacity	ton	100	160	200	250	300	400
Stroke per Minute	spm	60	50	40	40	40	30
Nominal Tonnage Height	mm	5,5	6	6,5	7	7,5	7,5
Stroke Adjustment	mm	20-150	20-150	20-150	20-150	20-200	20-200
*Max. Closed Mould Height	mm	350	400	450	500	500	500
Table - Ram Distance	mm	500	550	600	650	700	700
Ram Adjustment	mm	0-80	0-100	0-120	0-120	0-120	0-140
Table Dimension	mm	900x1000	1000x1000	1000x1200	1100x1200	1100x1300	1100x1300
Ram Dimension	mm	900x1000	1000x1000	1000x1200	1100x1200	1100x1300	1100x1300
Motor Power	kW	11	15	18,5	18,5	22	30

\*Ram at B.D.C., Ram Adjustment is Up.



# PMF 2 / PMF 2L Series

H type two point mechanical presses fixed stroke



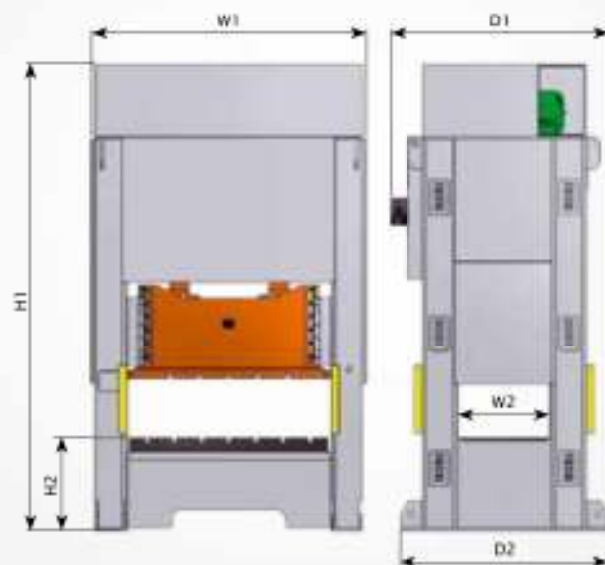


## STANDARD FEATURES

- Pneumatic Clutch & Brake Combination
- Dual Safety Valve
- Both Hands Control
- Foot Pedal Control
- Progressive Motorized Lubrication System
- Gears in Oil Tank
- Automatic Ram Adjustment
- Shut Height Indicator
- Mechanical Rotary Cam Limit Switch (4 Array)
- Magnetic Cam Limit Switch
- Inverter
- Programmable Control System (PLC)
- Touch-Operated Monitor
- Conformity of CE Machinery Directives
- Double Sided Photocell Safety Guard
- Hydraulic Overload Protector
- Safety Block
- Separated Piano Type Electric Panel
- Pneumatic Balancing Cylinders
- Rubber Anti-Vibration Pads
- 2 Year Warranty(\*)

## OPTIONAL ACCESSORIES

- Inverter (speed variation)
- Pneumatic or hydraulic ejector or die cushion
- Lower auxiliary table
- Strain gauge system,
- NC digital display with memories



Front View

Side View

(\*) Normal Operating Conditions Excluding User Errors

DIMENSIONS		S: con almohadilla antivibración				H: sin almohadilla antivibración			
		PMF-2 300 / PMF-2L 300		PMF-2 400 / PMF-2L 400		PMF-2 500 / PMF-2L 500		PMF-2 630 / PMF-2L 630	
		S	H	S	H	S	H	S	H
H1	mm	4900	4850	5100	5050	5350	5300	5600	5550
H2	mm	900		1000		1100		1100	
W1	mm	3300	3600	3400	3700	3500	3800	3600	3900
W2	mm	1000		1000		1000		1000	
D1	mm	2500		2500		2600		2600	
D2	mm	2300		2300		2400		2400	

## TECHNICAL FEATURES

Press Capacity	ton	300		400		500		630	
Stroke per Minute	spm	30-40		30-40		20-30		20-30	
Nominal Tonnage Height	mm	8	7	8,5	7,5	8,5	7,5	9	8
Stroke Adjustment	mm	250	200	250	200	250	200	250	200
*Max. Closed Mould Height	mm	550		550		600		600	
Table - Ram Distance	mm	800	750	800	750	850	800	850	800
Ram Adjustment	mm	0-120		0-120		0-140		0-140	
Table Dimension	mm	1300x2500	1300x2800	1300x2500	1300x2800	1300x2500	1300x2800	1300x2500	1300x2800
Ram Dimension	mm	1300x2500	1300x2800	1300x2500	1300x2800	1300x2500	1300x2800	1300x2500	1300x2800
Motor Power	kW	30		37		45		55	

\*Ram at B.D.C., Ram Adjustment is Up.



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