Maxi-Stamper™ | 200 to 1,000 Tons

HEIM®
ROUSSELLE®
THE HEIM GROUP

STAMPING OUT DOWNTIME™

Standard Features

- Steel Fabricated Construction
- Drive Capacity Rated 1/2" Above Bottom of Stroke
- Self-Diagnostic Solid State Controller
- Moveable Operator Console
- Low Inertia Combination Air Clutch and Brake
- Tie Rod Construction
- Eccentric Gear Drive System (In Oil Bath)
- Enclosed Crown
- Bed Areas Up to 192" x 84"
- Motorized Slide Adjustment with Digital Position Indicator
- Adjustable, Full Length 8 Point Square Gibbing
- Recirculating Lubrication System
- Helical Intermediate Gears
- Dual Air Valve
- Air Counterbalance System
- Hydraulic Overload System
- Ball Type Adjusting Screw with Bronze Seat
- Brake Monitor with Light Indicator
- Shut Height to Your Requirements
- Bolster Plate
- Forward/Reverse Selector Switch
- Electric Counters
- T-Slotted Slide and Bolster
- Hydraulic Tie Rod Nuts
- Bed Deflection .0015" Per Foot

Optional Features

- Link Motion
- Variable Speed Drive
- Provisions for Die Cushions
- Die Cushions
- Flywheel Brake
- Tonnage Indicator
- Light Curtains
- Special Drilling and Machining
- Additional Operator Stations
- Knockout Bar
- Special Bed Sizes
- Isolator Pads
- Custom Speeds
- Custom Systems Interface
- Die Protection
- Hydraulic Clutch

MADE IN THE USA

Maxi Stamper Feature Description

Press Construction

The press is a fabricated steel design using heavy main plate for each structure. The crown, bed and slide are a welded steel plate box type construction. Our computer aided design pays particular attention to strengthening areas in critical sections where load is being transmitted and where deflection can be reduced. Our fabrication designs provide for maximum rigidity and minimum deflections for the various directional stresses that a press can be subjected during stamping operations. Four tie rods pass through the structures and are pre-stressed to hold the structures in compression. The bed design has a deflection of .0015" per foot of width at full load on a tool covering 2/3 of the bed area symmetrically spaced on the left to right and front to back center lines.

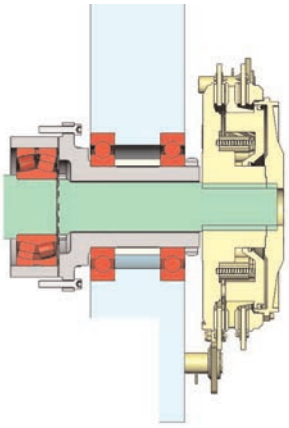
Crown Mechanism

The eccentric gear drive is housed in an enclosed crown structure and running in a bath of oil. Spur type eccentric gears with helical intermediate gears are used on single and two point presses and four point straight side presses. An eccentric strap, a solid steel plate connection, with replaceable bronze bearings connects the eccentric gear to the slide structure through a ball and socket connection.

Eccentric Gear Drive

With an eccentric gear drive the eccentric is an integral part of the main gear that rotates on a stationary pin supported in the crown. This gearing is very compact and with the eccentric being integral with the gear, torque is being transmitted directly from the gear to the eccentric eliminating all torsional load from the shaft. The drive rating is .500" from bottom stroke.

Combination Air Clutch and Brake

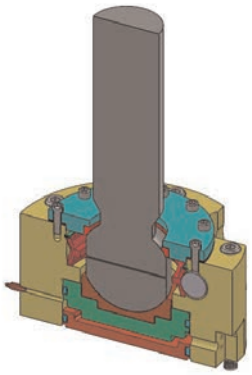


The quill mounted flywheel clutch is controlled through a solenoid operated dual air valve. The heavy duty low inertia combination clutch and brake withstands the stress of frequent stop and starts and repeated heavy shocks. The clutch is sized and selected for maximum capability and high rotational energy and efficiency in dissipating heat that may be generated during operation. The quill mounting of the clutch to the flywheel offers maximum safety while offering ease of maintenance and replacement of normal wear items such as friction pads. Liners are replaced without removing the flywheel or other major components.

Eccentric Gear Drive

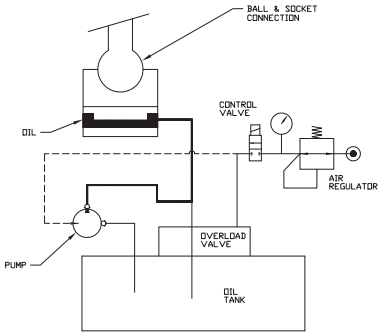
Slide Mechanism

The adjusting screw is threaded into the barrel section of the connecting rod. The ball end of the adjusting screw is fitted into the socket connection attached to the slide structure. Ball and socket connection allow forces to be distributed evenly that can provide greater off center loading allowing for a higher snap through reverse loading during blanking. Also housed in this assembly is the slide elevation adjustment device. A slide adjustment drive motor is mounted within the slide structure. Positive mechanical stops establish the limits of adjustment. A digital slide position indicator provides accurate display of slide position to .001"



Hydraulic Overload System

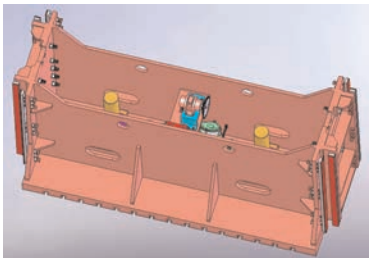
The hydraulic overload system minimizes costly down time, and eliminates unnecessary damage to the press and tooling. The overload device incorporates a hydraulic cylinder located in the slide under the slide adjusting



mechanism. The overload protection system is controlled by setting the desired trip tonnage through an air pressure regulator to the cylinder of the overload valve assembly. When an overload is encountered pressure increases in the cylinder to the setting of the preset regulator. A relief valve opens allowing oil to flow and creating space within the cylinder. Simultaneously as the oil is dumped, a signal is sent to disengage the clutch and to stop the press, while the slide travels approximately 1/2" (overload stroke) into the void left by the oil displacement avoiding an overload condition.

8 Point Gibbing

Wide non-metallic way liners are bolted to the slide. All gibs are adjustable to insure accurate alignment of the slide in front to back and right to left directions. Ease of adjustment is assured by use of a number of clamping and adjusting screws. Extra long gibs having greater bearing area retaining the slide fully and accurately in any position of the slide stroke and adjustment.



Counterbalance System

All Maxi Stampers are equipped with adjustable air counterbalance cylinders to support the weight of the slide structure and weight of upper die tooling. Adjustment of the air pressure allows for differences in upper die weight, insures smooth operation through the entire press stroke and reduces breakthrough shock during blanking operations. Carbon fiber cylinders, an innovative Heim design, provide maximum performance with minimal component wear and maintenance.

Hydraulic Tie Rod Nuts

Each of the four tie rod nuts is fitted with a hydraulic piston. Each nut is connected to an air operated hydraulic pump. As pressure is built up by the pump the piston raises the nut stretching the tie rod. When the tie rod is stretched to the desired height, spacers are placed under each nut. Pressure is then released leaving the tie rods under tension holding the press structures together.

Automatic Lubrication

The press is furnished with an automatic recirculating oil lubrication system which lubricates all major bearings and components in the drive system as well as gibs and adjusting screws. The systems automatically cycles the lube pump and divides the flow of oil in the correct proportions to each required point. The system continuously monitors for electrical failure, pump failure, low oil level and line pressure. The master control panel flashes a warning that indicates a lubrication failure and stops the press.

Pneumatic Controls

Air pressure settings for the press can be easily adjusted from floor level. Rugged glycerin filled gauges accurately display counterbalance and clutch brake air pressure. These controls as well as filters, regulators, lubricators and other air control elements are located in a control box mounted on a column of the press.

Solid State Press Control

Two separately powered dual microprocessors incorporate all the ANSI, OSHA and CSA safety requirements for press control reliability. Controls are housed in a Nema 12 enclosure. The press controller monitors and governs all press functions. The main key lock selector switch has Off-Inch-Single Stroke-Continuous mode of operation. The operator control bar is supplied with two guarded run/inch buttons, emergency stop palm button and prior action push button. Control also features forward/reverse switch, brake monitoring and stroke counter and touch screen display for internal and external diagnostics. The microprocessor has ample inputs and outputs along with limit switches for interface of ancillaries.

Installation and Training

When shipped, the machine must be disassembled and placed on flat bed trucks for transport. The Heim Group Service Engineers will install your press (excluding rigging) at your facility and provide training for your operators. Maxi-Stamper presses meet ANSI-B11.1 2005 press and electrical standards in accordance with section 4.

Point of Operation Guarding

Point of operation safety guarding or devices are the sole responsibility of the employer (user) of the machine as provided in ANSI B11.1 2001 as published by the American National Standards Institute Inc., 1430 Broadway, New York, NY and OHSA regulations.

Single Point Specifications

Model	S1-200	S1-300	S1-400	S1-500	S1-600
Capacity Tons	200	300	400	500	600
Rating BDC	.500	.500	.500	.500	.500
Stroke (STD)	6	8	8	10	10
Stroke (MAX)	12	16	18	20	20
Bed/Slide Area	42 x 32	42 x 32	48 x 32	60 x 32	60 x 32
Shut Height	20	24	24	30	30
Bolster Thickness	4	4	6	6	8
Slide Adjustment	6	6	6	6	6
SPM (Fixed)	30	30	30	25	25
SPM (Variable)	20-40	20-40	20-40	20-40	20-40
Motor HP	20	30	40	50	60
Floor to Top of Bed	36	36	38	42	42

Specifications can be altered to meet your specific requirements.

Two Point Specifications

Model	S2-200	S2-300	S2-400	S2-500	S2-600	S2-800	S2-1000
Capacity Tons	200	300	400	500	600	800	1000
Rating BDC	.500	.500	.500	.500	.500	.500	.500
Stroke (STD)	6	8	8	8	8	12	12
Stroke (Max)	12	12	16	16	16	24	24
Bed/Slide Area	78x42	78x42	100x48	120x48	120x48	120x60	132x60
Bed/Slide Max	144x60	144x60	168x60	168x60	168x60	168x60	168x60
Shut Height	30	30	30	30	36	36	36
Bolster Thickness	6	6	8	8	10	10	12
Slide Adjustment	10	10	10	10	10	10	10
SPM (Fixed)	40	35	30	30	25	20	20
SPM (Variable)	30-60	25-50	20-40	20-40	20-40	15-30	15-30
Motor HP	20	30	40	50	60	100	125
Floor to Top of Bed	38	38	42	42	48	54	60
Window Opening	26/38	26/38	26/42	26/54	32/54	32/54	32/54

Specifications can be altered to meet your specific requirements.

Four Point Specifications

Model	S4-500	S4-600	S4-800	S4-1000
Capacity Tons	500	600	800	1000
Rating BDC	.500	.500	.500	.500
Stroke (STD)	10	10	12	12
Stroke (Max)	18	18	24	24
Bed/Slide Area	120 x 72	120 x 72	120 x 72	120 x 72
Bed/Slide Area (Max)	168 x 84	192 x 84	192 x 84	192 x 84
Shut Height	38	38	42	42
Bolster Thickness	8	8	10	10
Slide Adjustment	10	10	10	10
SPM (Fixed)	25 - 30 - 40	25 - 30 - 40	25 - 30 - 40	25 - 30
SPM (Variable)	20 - 40	20 - 40	20 - 40	20 - 40
Motor HP	75	100	125	150
Floor to Top of Bed	48	48	60	60
Window Opening	60	60	60	60

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