

COMPACTING  
&  
SIZING  
PRESSES

*For  
Powder Metal,  
Ceramics,  
Plastic  
& More*



*Pressing  
On To  
Perfection*



**GASBARRE**  
PRODUCTS, INC.

G A S B A R R E   P R E S S   D I V I S I O N

# Precision Presses for Exacting Industries

Gasbarre Products is an international supplier of mechanical powder compacting and sizing presses for simple to complex parts. Gasbarre designs are engineered for rugged, reliable operation and backed by our reputation for quality and customer service.

Four series of powder compacting presses, in sizes from 5 to 800 ton, are designed to address the part geometries encountered in production. The Gasbarre design philosophy considers ease of operation, setup and maintenance to maximize productivity and run-time.

## STANDARD SERIES (STD)

Our most economical design, the Standard Series presses compact a wide range of parts. One lower and one upper punch are standard with option to add a second upper punch. Molding on a core rod step and/or shelf in the die allow for multilevel parts. The core rod may be mounted to either the fixed pressure platen or allowed to float using the core rod platen. Push up ejection is accomplished through an ejection cam and push rod.

## PERFORMANCE SERIES (PSP)

The Performance Series press makes improvements to the field proven Standard Series design.

This series is redesigned with:

- A crosshead style upper guidance system.
- Hardened wear surfaces for improved reliability against abrasive materials.
- Hinged guards provide clean lines and easy access for maintenance and setup.
- Extra-long precision guide bushings are located closer to the die surface for extra rigidity, improved punch entry and reduced tool wear.

## Powder Compacting Press S

| Tonnage                                      | 5    |        | 10   |        | 15   |        |      |
|--|------|--------|------|--------|------|--------|------|
|  | fill | stroke | fill | stroke | fill | stroke |      |
| STD <sup>1</sup>                             | inch | 1.125  | 2.50 | 1.50   | 3.00 | 2.50   | 4.50 |
|  | mm   | 29     | 64   | 38     | 76   | 64     | 114  |
| PSP <sup>1</sup>                             | inch | -      | -    | -      | -    | 2.50   | 4.50 |
|  | mm   | -      | -    | -      | -    | 64     | 114  |
| DSP <sup>2</sup>                             | inch | 1.50   | 2.50 | 2.00   | 3.50 | 2.75   | 4.50 |
|  | mm   | 38     | 64   | 51     | 89   | 70     | 114  |
| MA <sup>2</sup>                              | inch | -      | -    | -      | -    | -      | -    |
|  | mm   | -      | -    | -      | -    | -      | -    |
| Range of Speed Adjustment strokes per minute |      | 15-90  |      | 10-60  |      |        |      |

## Standard on All Gasbarre Com

- Floating die table and die control.....
- Four post design die set.....
- Ortlinghaus air clutch and brake.....
- Tooling mounts and hardened die adapter made to customer specifications.....
- Adjustable top and bottom punch mounts, density over- as well as fill, ejection, die table float and core rod position.....
- Shuttle type filler shoe system.....
- Powder hopper, powder collection pan, part collection tray.....
- Forged, precision ground, and hardened crankshafts in va.....
- Backgear driven with variable speed drive.....
- Core rod may be mounted either fixed or floating.....

CERTIFIED  
ISO 9001



NOTE: Presses shown are representative configuration

# Specification Chart

| Mechanical Variable-Speed Drive |        |      |        |      |        |      |        |      |        |      |        |      |        | Eddy Current Variable-Speed Drive |        |      |        |      |        |      |        |      |  |   |
|---------------------------------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|-----------------------------------|--------|------|--------|------|--------|------|--------|------|--|---|
| 20                              |        | 30   |        | 45   |        | 60   |        | 100  |        | 125  |        | 150  |        | 200                               |        | 300  |        | 350  |        | 400  |        | 500  |  |   |
| fill                            | stroke | fill | stroke | fill | stroke | fill | stroke | fill | stroke | fill | stroke | fill | stroke | fill                              | stroke | fill | stroke | fill | stroke | fill | stroke | fill |  |   |
| 3.25                            | 4.50   | 3.25 | 5.25   | 4.50 | 7.00   | 6.25 | 9.00   | 6.25 | 9.00   | -    | -      | 6.25 | 9.00   | 6.25                              | 9.00   | 6.25 | 9.00   | -    | -      | -    | -      | 6.25 |  |   |
| 83                              | 114    | 83   | 133    | 114  | 178    | 159  | 229    | 159  | 229    | -    | -      | 159  | 229    | 159                               | 229    | 159  | 229    | -    | -      | -    | -      | 159  |  |   |
| -                               | -      | 3.25 | 5.25   | 4.50 | 7.00   | 6.25 | 9.00   | 6.25 | 9.00   | -    | -      | -    | -      | 6.25                              | 9.00   | 6.25 | 9.00   | -    | -      | -    | -      | 6.25 |  |   |
| -                               | -      | 83   | 133    | 114  | 178    | 159  | 229    | 159  | 229    | -    | -      | -    | -      | 159                               | 229    | 159  | 229    | -    | -      | -    | -      | 159  |  |   |
| 3.25                            | 5.00   | 3.25 | 5.50   | 4.50 | 7.00   | 6.25 | 9.00   | 6.25 | 9.00   | -    | -      | 6.25 | 9.00   | 6.25                              | 9.00   | -    | -      | -    | -      | 6.25 | 10.00  | -    |  |   |
| 83                              | 127    | 83   | 140    | 114  | 178    | 159  | 229    | 159  | 229    | -    | -      | 159  | 229    | 159                               | 229    | -    | -      | -    | -      | 159  | 254    | -    |  |   |
| -                               | -      | -    | -      | -    | -      | 6.25 | 9.00   | -    | -      | 6.25 | 9.00   | -    | -      | 6.25                              | 9.00   | -    | -      | -    | -      | 6.25 | 10.00  | 6.25 |  |   |
| -                               | -      | -    | -      | -    | -      | 159  | 229    | -    | -      | 159  | 229    | -    | -      | 159                               | 229    | -    | -      | -    | -      | 159  | 254    | 159  |  |   |
| 8-50                            |        |      |        | 7-40 |        |      |        | 7-25 |        |      |        | 7-23 |        |                                   |        | 7-25 |        |      |        | 7-19 |        |      |  | 7 |

<sup>1</sup>die platen float is 1/2 fill depth in push-up ejection press  
<sup>2</sup>die platen float equals fill depth in withdrawal style press

## Compacting Presses

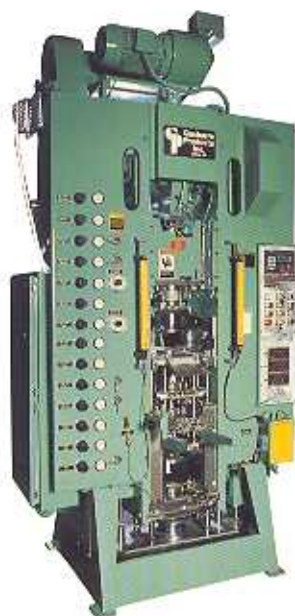
- ..... Precise placement of density split and enables step in die capability
- ..... Rigidity and precision in the lower movement
- ..... Proven quality
- ..... Reliable and matched to your tooling standards. Use existing tooling.
- ..... Ease of setup, tool design and flexibility in part process development
- ..... Simple, dependable, gravity fed
- ..... Designed for powder metal applications
- ..... Years of reliability and repeatability under demanding conditions
- ..... Range of speed adjustment and high flywheel energy
- ..... Greater flexibility in part types and set up

## DIE SET SERIES (DSP)

The Gasbarre Die Set Series press features a readily removable die set with adjustable molding stops. Additional die sets can be set up outside the press for better productivity. Press settings are infinitely adjustable within their range. The Die Set Series supports two lower and two upper punch sets. A pneumatic core rod system is included. The core rod may be mounted to the die set core rod plate to move in relation to the die or to the core rod module for independent movement. A withdrawal ejection system incorporates synchronized dual cams and push rods.

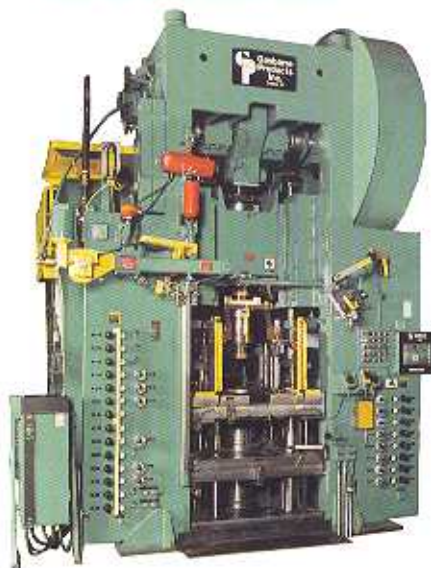
## MULTI-ACTION SERIES (MA)

Our top of the line series, the Gasbarre Multi-Action mechanical press, uses state-of-the-art technology for compacting complex parts. Our exclusive system offers selective molding stops. The unique selective ejection system allows any of the top platens to be stationary or floating, depending on the part requirement. Selective ejection eliminates the need for expensive bridging of tooling members thereby decreasing deflection. The #3 platen has a 1-1/2" float capability and a fixed mold position. Motorized top punch, fill, molding stops, and ejection positions have digital readouts. Other standard features include pneumatic dual upper punch system, top punch hold down, automatic press lubrication system, tonnage monitor, underfill, pneumatic up-float/down-float core rod system with stops, and microprocessor-based limit programmer.



30-Ton Die Set Series

350-Ton Multi-Action Series



### Current Variable-Speed Drive

| Stroke | 500   |        | 600   |        | 750   |        | 800   |        |
|--------|-------|--------|-------|--------|-------|--------|-------|--------|
|        | fill  | stroke | fill  | stroke | fill  | stroke | fill  | stroke |
| 6.25   | 10.00 | -      | -     | 6.25   | 10.00 | -      | -     |        |
| 159    | 254   | -      | -     | 159    | 254   | -      | -     |        |
| 6.25   | 10.00 | -      | -     | -      | -     | -      | -     |        |
| 159    | 254   | -      | -     | -      | -     | -      | -     |        |
| -      | -     | 6.25   | 10.00 | -      | -     | 6.25   | 10.00 |        |
| -      | -     | 159    | 254   | -      | -     | 159    | 254   |        |
| 6.25   | 10.00 | -      | -     | 6.25   | 10.00 | -      | -     |        |
| 159    | 254   | -      | -     | 159    | 254   | -      | -     |        |

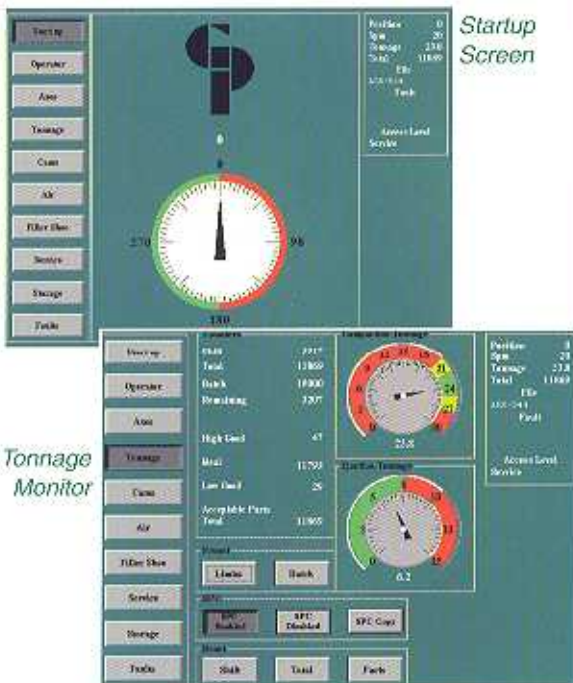
7-17

7-13

## PRESSLOG HMI

### HUMAN MACHINE INTERFACE & CONTROL SYSTEM

The optional Windows®-based PressLog HMI uses a graphic touch-screen display. Operators know the machine's status at a glance. Password security allows operator, supervisor, and maintenance levels of access. Users can check fault logs, store virtually limitless production process information, and access on-line troubleshooting aids. PressLog retains a history of all setups. Controls display metric or Imperial units and are programmable for your language.

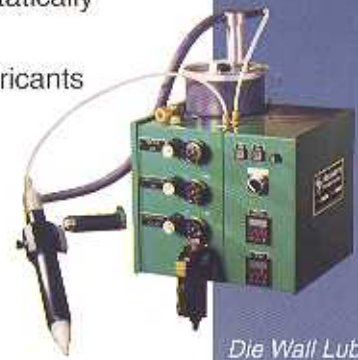


Screens provide visual feedback and status.

## DIE WALL LUBRICATION SYSTEM

Powdered lubricant coats the die cavity by means of statically charged particles.

- Reduces need for lubricants in the powder mix
- Allows greater green strength and higher densities
- Improves sintered properties
- Reduces lubricant contaminants from sintering process
- Readily adaptable to different make/model of press
- Maintains high production throughput



Die Wall Lubrication System



Fluidized Fill Shoe

## FLUIDIZED FILL SHOE

This system provides faster powder transfer and more uniform fill of complex die cavities by using a column of air to support the powder flow.

- Improves weight and size control
- Reduces front-to-back density variations
- Increases filling rate for flowable powders
- Improves/enables flow for powders
- Allows optimal filling of complex die cavities
- Reduces powder spillage



|      |        |
|------|--------|
| fill | stroke |
| 3.25 | 4.50   |
| 83   | 114    |

|      |      |
|------|------|
| 3.25 | 5.00 |
| 83   | 127  |

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## SIZING, COINING AND RESTRIKING PRESSES AND SYSTEMS

Two styles of press are available from Gasbarre for adjusting geometric and metallurgical properties, creating surface detail, or achieving densification in sintered parts.

### INCLINED AUTOMATIC SIZING PRESS

| Tonnage<br>(U.S. Tons) | Stroke |     | Max. part length* |    | Strokes<br>Per Minute |
|------------------------|--------|-----|-------------------|----|-----------------------|
|                        | Inches | mm  | Inches            | mm |                       |
| 5                      | 2      | 50  | 1/2               | 12 | 50-200                |
| 10                     | 3      | 76  | 5/8               | 15 | 50-200                |
| 15                     | 4-1/2  | 114 | 1-1/4             | 31 | 50-200                |
| 30                     | 5      | 127 | 1-1/2             | 38 | 30-150                |
| 45                     | 7      | 177 | 1-3/4             | 44 | 30-150                |
| 60                     | 10     | 254 | 3                 | 76 | 15-100                |
| 100                    | 10     | 254 | 3                 | 76 | 10-60                 |

\*NOTE: Optional strokes and length of part capabilities are available

An inverted "die in the head" design and inclined structure allow maximum throughput of bushings, bearings and other parts requiring little radial orientation. Ideal for use with automatic feeder systems, the lower snag pin positions each part below the die head while an adjustable knockout bar in the top ram ejects the part. The finished piece drops through a chute to a collection bin at the back of the press.



## UPRIGHT AUTOMATIC SIZING PRESS

The upright press uses a ratchet-type dial index unit to feed complex parts requiring radial orientation. Ejection is performed by cam/lift arm system, pushing each part out of the die. Index pockets can be changed to accommodate a range of parts.



5 ton through 750 ton presses available in tonnage increments as listed for the "Standard Series Powder Compaction Press".

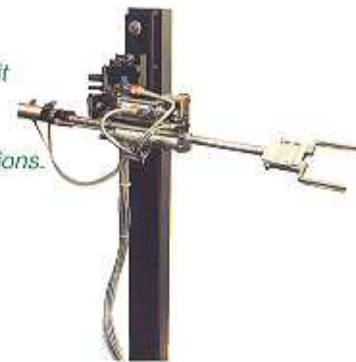
## LABORATORY SERIES POWDER COMPACTING PRESSES

The Laboratory Series hydraulic press is ideal for material testing labs, material science labs in colleges and universities, and ceramic or powder metallurgy parts producers that need to compact test bars or sample parts. It's easy to setup and features a removable die set and forced floating die table for density control.

### Production Accessories

#### Pick & Place Unit

Mounted to the front of a press, the Pick & Place Unit can pick off up to 20 parts per minute through seven pneumatically powered functions.



### Available Press Options\* Selection Chart

|  |   | Sizing Presses     |   |
|--|---|--------------------|---|
|  |   | Compacting Presses |   |
| Overfill/Underfill                                     | Improved fill   | Y                  |   |
| Top punch hold down                                    | Protects part during ejection                                       | Y                  |   |
| Tonnage monitors with feedback capability              | Monitor critical operating parameter and alarm on out of tolerance. | Y                  | Y |
| Digital position readout                               | Speeds setup.   | Y                  | Y |
| Filler shoe systems                                    |   |                    |   |
| - Ball screw servo motor                               | Programmable movement   | Y                  |   |
| - Dual feed shoes                                      | Dual powder systems   | Y                  |   |
| - Fluidized fill shoe                                  | Difficult flowing powders and fill.                                 | Y                  |   |
| Automatic Lubrication                                  | Programmable/unattended operation                                   | Y                  | Y |
| Microprocessor based limit programmers                 | Machine status, speeds set up, optional machine safeties and alarms | Y                  | Y |
| Motorized adjustments                                  | Setup control from central location.                                | Y                  | Y |
| Special core rods                                      | Spring snap and other adaptations.                                  | Y                  | Y |
| Automatic parts feeder units                           | Hands free operation  |                    | Y |
| Parts handling, conveying and accumulating accessories | Minimize operator intervention                                      | Y                  | Y |
| Special engineering and design                         | Flexible design configurations. (Deep fill, short stroke, etc.)     | Y                  | Y |

\* Additional options and safeties are available. Consult your sales engineer for details.



#### Rotary Parts Accumulator

The adjustable speed, portable rotary parts accumulator helps eliminate part nicking and increases productivity.

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### ***Remanufacturing and Rebuild Services***

We offer a complete range of services for Gasbarre presses, as well as presses made by Stokes, Tamagawa, Mitchell, Kux, Bliss, and others. Our rebuild team can disassemble and

clean your press unit, evaluate wear surfaces, check for structural damage, remanufacture components, and fit them to the press. These processes are followed by a thorough quality check to ensure that the machine performs to your specifications.

We offer upgrades and retrofits to add capability, increase reliability, improve overall controls, extend guarding, or make set up easier. Rebuild, upgrade, and retrofit services are completed quickly to return your press to productive service as soon as possible.

### ***Customer Service, Worldwide Technical Assistance, and Replacement Parts***

The qualified technicians, trainers and inside sales staff of the Press Division, Customer Service Department offer prompt, courteous assistance to return and maintain your press production to top efficiency. Consultation is available

by telephone, fax or e-mail. On-site services can be arranged through our worldwide network of factory trained technicians.

- Troubleshooting & Repair Services
- Die Set, Retrofit & Major Assemblies
- Operator, Set up, and Maintenance Training
- Replacement parts
- Installation
- Field Retrofits

