



## GASBARRE SERVO ELECTRIC PRESS

GLOBAL SUPPORT TEAM  
ON-SITE SERVICE

*The Gasbarre Servo-Electric Press is available for precise compaction of powder into a wide variety of geometries. The technology utilized includes high-efficiency and high-precision servo drives to control the motion of the upper ram, die plate, and automatic die filling systems. Each axis of the press is freely programmable for complete control of the compaction cycle: die filling, upper punch motion/compaction, die motion, and ejection cycle. Movement of the press axes are performed by closed-loop control. This means that extreme precision and repeatability are the result. This high-precision affords for consistent production of compacted powder components*

### KEY FEATURES

- Closed-loop controlled servo-electric upper ram
- Closed-loop controlled servo-electric lower ram
- Closed-loop controlled servo-electric fill system ram

### RIGID SIDE PLATE FRAME

- Precision machined and stress relieved assembly
- Precision key-locked upper/lower crowns
- Unitized assembly with support base

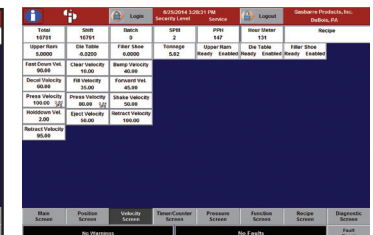
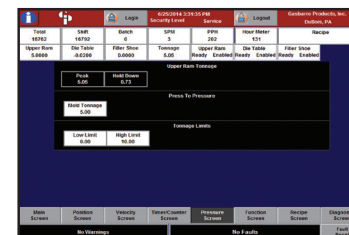
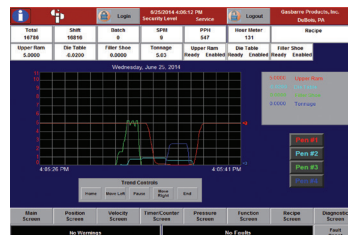
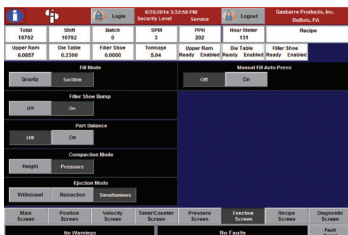
### REMOVABLE DIE SET ASSEMBLY

- Upper punch plate (floating)
- Die plate (floating)
- Lower punch plate (stationary)
- Core rod plate (floating with die)
- Four post plate guidance

### AUTOMATIC DIE FILLING SYSTEM

### HMI-BASED CONTROL SYSTEM

- Featured below:



# TECHNICAL DATA: GASBARRE 20 TON SERVO ELECTRIC POWDER COMPACTION PRESS

## PRESS CAPACITY

■ 20 tons US [181 kN]

## FILL DEPTH

■ 4.0" [254mm]

## UPPER RAM

■ Stroke 8.00" [203mm]  
■ Control Closed loop servo control w/position & velocity control programmable via touch screen  
■ Top Punch Hold Down Included via position or pressure control  
■ Maximum velocity 12.5 in/sec [317.5 mm/sec]  
■ Mold velocity 2.5 in/sec [63.5 mm/sec]  
■ Positioning performance Repeatability +/- .0005 [+/- 13 µm]

## LOWER RAM:

■ Pressing/Counterforce Capacity 10 Tons US [91 kN]  
■ Ejection Force Capacity 10 Tons US [91 kN]  
■ Stroke 4 in [102mm]  
■ Control Closed loop servo control w/position & velocity control programmable via touch screen  
■ Under-Fill/Overfill Included via touch screen  
■ Part Balance Included via touch screen  
■ Maximum velocity 14.6 in/sec [370.8 mm/sec]  
■ Mold Velocity 3.1 in/sec [78.7 mm/sec]  
■ Positioning performance Repeatability +/- 0.0005 in [+/- 13 µm]

## TOOL HOLDERS AND ADAPTERS

■ **Die size (diameter)** 3½ in [88.9 mm] Flange Diameter  
3 in [76.2 mm] Body Diameter  
1½ in [38.1 mm] Min Body length  
■ **Die Pot & Clamp Ring** Included per customer specifications

## DIE FILLING SYSTEM

■ **Powder Fill Shoe** 4 in x 4 in [102 mm x 102 mm] (Aluminum)  
■ **Stroke** 9.8 in [250 mm]  
■ **Control** Closed loop servo control w/position & velocity control programmable via touch screen  
■ **Maximum velocity** 28 in/sec [711 mm/sec]  
■ **Positioning performance** Repeatability +/- 0.001 in [+/- 25 13 µm]  
■ **Fill shoe hold down system** Adjustable pneumatic force  
■ **Powder hopper** Elevated/Frame mounted with transfer hose

## LUBRICATION

■ **Lubrication** Manual grease fittings

## SAFETIES

■ **Ground Fault Protection** Included  
■ **Air Pressure Monitor** Included  
■ **Safety point of operation barrier guard** Included

## PRESS MODES OF OPERATION

■ **Auto-Single** Included  
■ **Auto-Repeat** Included  
■ **Manual mode** Included  
■ **Tool Set-Up mode** Included

## TONNAGE MONITOR

■ **Device** Load Cell (mounted to upper ram)  
■ **Monitor Display** Via touch screen

## ADDITIONAL TECHNICAL INFORMATION

■ **Supply (inlet) Air Pressure Required** 1 SCFM @ 80 psi [5.5 bar @ 28 lit/min]  
■ **Press Weight including Die Set** Ref Dimensional L/O  
■ **Powder Hopper Capacity** Integrated With FFS

## UTILITIES

■ **Power** 480-415-400-380 VAC/3-Phase/60-50Hz  
■ **Compressed air** 5 cfm @ 80 psig

## DIMENSIONS & WEIGHT (approximate)

■ **Width x Depth x Height (overall)** 57 in x 67 in x 120 in [1448 mm x 1702 mm x 3048 mm]  
■ **Die height** 53 ½ in [1359mm]  
■ **Weight** 6700lbs.

## OPTIONS:

■ Spare removable tool set ■ Pneumatic dual upper punch head ■ Up/down floating core rod ■ Fluidized Die Filling System  
■ Die Wall Lubrication System ■ Warm Compaction die heating system ■ Dust boot bellows on die set posts ■ Die area light screen  
■ Quick changeover tool collet system ■ Centralized automatic lubrication system ■ Part handling pick and place system