CAN MOLD
PHOENIX SERIES

Full Electric (FE) & Hybrid Electric (HE)

Full Electric EBM Machine
The HE and FE series are identical except that the HE has a Hydraulic Clamp

The heavy duty, Phoenix series is available in the following 5 sizes as standard, available in Hydraulic HE and FE sizes:

<table>
<thead>
<tr>
<th>Platen Size (W x H)</th>
<th>105F</th>
<th>1010F</th>
<th>1012F</th>
<th>1015F</th>
<th>Special 10-155</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>300mm x 365mm</td>
<td>380mm x 440mm</td>
<td>480 x 340mm</td>
<td>700mm x 445mm</td>
<td>480 x 445</td>
</tr>
<tr>
<td>Machine Stroke</td>
<td>500mm</td>
<td>650mm</td>
<td>650mm</td>
<td>900mm</td>
<td>650mm</td>
</tr>
<tr>
<td>Standard Clamp Tonnage</td>
<td>78Kn</td>
<td>127Kn</td>
<td>110Kn</td>
<td>196Kn</td>
<td>127Kn</td>
</tr>
<tr>
<td>Standard Extrusion Capacity</td>
<td>60 Kg Hour (65mm extruder)</td>
<td>90 / 105 Kg Hour (75mm extruder)</td>
<td>70 / 120 Kg Hour (75mm extruder)</td>
<td>230 Kg Hour (100mm extruder)</td>
<td>185 Kg Hour (90mm extruder)</td>
</tr>
<tr>
<td>Open Close Stroke</td>
<td>250mm</td>
<td>350mm</td>
<td>200mm</td>
<td>390mm</td>
<td>350mm</td>
</tr>
<tr>
<td>Machine Size (L x H x W)</td>
<td>3.8M x 2.45M x 3.6M</td>
<td>4.34M x 2.6M x 3.15M</td>
<td>4 M x 4.04 x 3.15M</td>
<td>6.2M x 4.7M x 2.5M</td>
<td>4M x 4.10M x 2.6M</td>
</tr>
</tbody>
</table>

Other models up to 20L available on request.

**Design / Integration / Support**

Our design engineers have paid particular attention to the design of the following:

- All electrics designed to meet CSA, UL and CE electrical standards with American based componentry.
- Safety standards to OSHA and ANSI, with 360° special protection with OMRON disconnects for operator safety.
- Design of clamp, horizontal linear carriage and blow pins with Proportional Hydraulics to give high speed and reliable operation, or with servo motors on the FE Full Electric.
- Siemens Controller (S7) with 100 sets of storage and Siemens 50pt or 100pt parison control.

**Complete Plant System**

- Blow Mold
- Auto De-flash
- Robot takeout of bottle through middle to 1 side
- Scrap removal to 1 side
- 2nd scrap removal to re-grinder
- Post mold cooling
- Molds provided (blow & de-flash)
- Parison Control
- View Stripe (to order)
- IML (to order)
- Auto Lubrication
- Multilayer (to order)
Product Types

Phoenix Series

Take-out of product through middle machine to 1 or 2 sides (choice) - Robot Arm System.

Conveyors Through middle for finished bottles. Scrap conveyor underneath, then onto grinder conveyor up to mouth of grinder.

Screen Siemens 7” touch screen standard.

Die Head Chrome plated die head with torpedo design.

Clamp Massively constructed toggle system with balanced frame.

Controls Cold start protection, self-diagnosis, empty hopper warning.

Lubrication Automatic control system.

Linear High precision, explosion proof guides (linear). Rapid, smooth movement.

Electrics CSA (Canadian Standard Electrics) systems, UL equivalent, CE equivalent.

Machine Layout
Configuration Linear Bearing, bobbing head system

Extruder:
- Left / right head adjustments
- 4 sections temperature control
- 3 sections cooling fan

Design of Scrap Removal Horizontal removal and climbing conveyor to grinder.

Manufacture of Machine To strict specifications controlled by Pet All Asia staff office. OSHA safety standards throughout, with gate safeties and utilities (disconnects) to OSHA standards. ESA sticker for Ontario standards included.

Scope of Supply Machine, parison control, de-flash, robot takeout, head, scrap conveyors (2), bottle takeout conveyor.

Molds Molds Aluminum with copper beryllium inserts standard, available with machine.
Head Tooling Available.
De-flash Tooling Available
Knife Variety available. Hot knife or pre-squeeze pinch knife standard

**Technical Specifications**

**Full Electric EBM Machine Product Technology**

Higher output speeds, higher production volumes, 45% lower energy consumption than Hydraulic Machines.

**Full Electric EBM Machine (Model Can Mold Phoenix FE)**

1. **Long Distance Trouble Shooting**
   Control of computer and program from manufacturer’s site to customer via Team Viewer.

2. **Servo Parison Control**
   - 100 point electric servo parison control system.
   - Response speed 1ms
   - Repeat accuracy 0.005mm

3. **Electric Head Lift**
   Multiple speed control for die head. Fast lift up, and slow decent, providing stable head lifting motion.

4. **Servo Blow Pin**
   Double direction guide rail design for blow pin with precise ball screw, increasing the stability of blow pin.
5. **Electric Platform Elevation**
   Electric driven lifting platform with worm gear reducer and guide technology to achieve stability.

6. **Servo Robot Takeout System**
   3 in 1 cantilever robot, with accurate positioning.

7. **Servo Mold Clamping – 250mm**
   - Patented electric mode-lock. Low or with enlarged speed ratio technology. Clamping force is increased.
   - Force of the front and rear clamping plates is very uniform.
   - 1 second mold open / mold close (250mm mold open stroke).

8. **Servo Carriage**
   Stable, smooth servo carriage movement.

9. **Pneumatic System**
   - The pneumatic system for blowing is separate from the main air system.
   - A cooling device in the blow pins speeds up the cooling time and shortens production time.
   - Robot arm fingers also include a post-cooling system.
10. Water System
Blow pin and robot takeout have water cooling, to accelerate the cooling of products.

11. Mechanical Motions
Servo motor control gives a fast response and a smooth trajectory.

12. Energy Saving
With servo motors and newest clamping technology, the full electric EBM machine saves energy consumption of up to 50% compared to traditional hydraulic machines.

13. Internet +
Intelligent manufacturing - SIEMENS ProfiNet bus technology.

14. Bussing Technique
The whole machine uses fieldbus technology.

15. Remote Maintenance
Our remote maintenance system can diagnose the machine running faults online and modify them while the machine is running.

16. Visual Inspection System
A full vision inspection system is available.

17. Parison Control System
The 100 point thickness control system can monitor the change of parison on the HMI screen.

18. Safety Protection
Full OSHA protection is provided.
19. Optional Configuration for Performance Improvement
- Joint Hot and Cold Knife
- Linear Guide Rail Structure - fast running
- Cold / Hot changeover achieved changing the blade only.

20. Air Cycle Function
Speeds up the cooling

21. Secondary Cooling Device
- Speeds up the cooling
- Cooling the bottle neck a second time

22. In Mold Labeling
In mold labelling option available

23. Leak Testing
Many Options are available
Features

24. **Thickness Control**
Controlled on screen

25. **Cooling Blowing**
Fast bottle Temperature reduction

26. **Electric Hoist**
This operation can be added to the machine

27. **Robot Takeout**
Bottles moved to rear for side takeout
28. Pre-seal Cutter
Suitable for special products. Pneumatic control with good sealing effect.

29. Vision Inspection
Inline systems available

30. Side Needle Function
Suitable for products with no bottle mouth or 2 or more bottles in different directions

31. Stop Device / Conveyor
Ensures good bottle separation

32. Slanted Blow Pin
For angled neck containers