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For Immediate Release

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Brown Introduces “Smart Control”...the Intelligent Solution

Brown Machine's **Smart Control** software incorporates machine intelligence to assist operators in achieving optimum machine performance throughout the thermoforming process. This new technology enables the machine to make appropriate operational adjustments automatically, communicate system performance and out-of-range operations, and send notifications of preventative maintenance needs. Brown has always provided innovative control solutions for equipment operation, but Smart Control takes this to a new level.

Here are some of the new Smart Control features:

- **Smart Process Control** - A forming process display with real-time, visual feedback of the process sequence. Hot links allow the operator to easily adjust the process variables at any point in the cycle.
- **A HELP** feature defines specific machine functions for operators.
- **Automatic systems and trending information** is now provided by sensors in the vacuum and pressure circuits.
- **Smart Control quickly recalibrates** the machine tonnage for optimal forming pressure, eliminating time and material waste. A self-adjusting servo-actuated head adjustment with $\pm .250$ " maintains a preset forming tonnage within the process recipe.
- **Smart Servo Control** - Self-adjusting electronic regulators in the form station balance cylinders now ensure optimum servo motor efficiency. The machine automatically recalibrates balance cylinder pressure to maximize servo motor performance, eliminating unnecessary nuisance machine faults, minimizing energy consumption, and reserving potential speed and torque capabilities for final process development.
- **An automated, built-in warning system** includes display warnings and lights when

servo motors and drives are approaching fault values. Smart Control notifies the operator that he is approaching maximum capacity of the motors and drives.

- **Smart Oven Control** - You now have the ability to import and store mold layouts within the process recipe for oven screen display specific to zone set-up and control. These graphic overlays show the operator precisely where the product aligns in relationship to the oven zones. The operator now has the ability to quickly add or reduce heat to efficiently profile the sheet temperature.
- **Smart 3rd Motion** - Brown's patented 3rd Motion System now has a teach mode to automatically seek and set parameters for maximum/minimum stroke limits within the process recipe.
- **Smart Index & Rails** - Rail protection circuitry is now embedded in the process recipe to prevent inadvertent rail and mold damage. During setup, the circuitry insures the rails are positioned outside of the mold area and confirmed against the process recipe setting. If they are not, the form station will not actuate. During operation, the circuitry prevents the operator from inadvertently adjusting the rails too far inward so they can come into contact with the mold.
- **A self-adjusting index motor tension system** reduces the holding torque during the forming process, providing maximum available torque and speed for the index function.
- **Smarter Preventative Maintenance Scheduling** –The machine now tells the operator when it needs maintenance. Gone are the days of maintenance schedules buried in the manual. Preventative maintenance schedules, based on hours and strokes, are embedded in the control system and require an electronic acknowledged action by the operator when there is an alert.

Brown Machine LLC, Beaverton, MI, is the global leader of thermoforming solutions. Brown engineers and manufactures a complete line of continuous and cut-sheet thermoforming equipment and related tooling/peripheral equipment. Brown has designed and produced numerous thermoforming innovations since 1952 and has machines operating in over 65 countries worldwide.

To learn more about Brown's Smart Control, visit our website: www.brownmachine.com and/or talk to your Brown Machine Representative about both Basic and Expanded Smart Control options.