



B-Series Thermoformers



Brown's B-Series Hot Sheet System Provides a Path to Manufacturing Sustainability

The direct extrusion B-Series Hot Sheet Thermoformer from Brown offers many new advantages over traditional pellet-to-product inline systems. This new Series demonstrates Brown's ongoing commitment to helping customers attain manufacturing sustainability by reducing their carbon footprints while increasing their profits. By locating a sheet extruder closer to the thermoformer, and integrating a roll stack within the B-Line thermoformer, the end result is a significant savings in energy, machinery, and operating costs.

These innovative Brown thermoformers incorporate a roll stack at the entrance end of the thermoformer. This means the hot sheet material is extruded directly onto a set of conditioning rolls within the machine, eliminating the need for a separate roll stand system. An accumulation section converts the process from continuous sheet flow to the intermittent cycle of the thermoformer.

The sheet transfers from the conditioning roll stack system into the thermoformer's rails at a higher process temperature, thus maintaining a greater core sheet temperature. This allows the system to utilize a 2-stop oven instead of a 4 or 5-stop oven, reducing the heat requirement by over one half, saving substantial energy costs. The two-stop top and bottom multiple-zoned oven is controlled to optimally profile the heat pattern of the sheet consistent with the material and product being thermoformed.

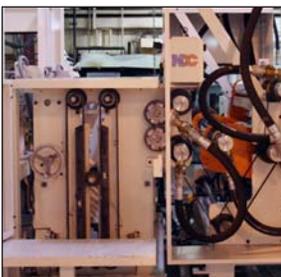
Coupled with a Brown T-Series Horizontal or V-Series Vertical Trim Press, the formed product is precisely trimmed. These presses are available in flywheel and servo actuated models with a variety of options to meet your specific trim requirements. B-Series thermoformers are in production in a range of sizes up to 54" x 60" producing both shallow and deep draw products. Output production of a hot drink lid system produces over 250,000 lids per hour with four rows of pre-punch and four rows of perimeter trim resulting in eight rows of precise trimming every trim cycle. Output production of 16 oz. drink cups is over 100,000 cups per hour. Systems are configured to produce product in a wide variety of materials, including HIPS, APET, Polypropylene and PLA.

In addition to the thermoformer and trim press, Brown can provide a complete turnkey pellet-to-product system including blending, extrusion, tooling, temperature control, granulation and product handling.

The B-Series Hot Sheet line offers thermoformers higher speed, more efficiency, energy savings, reduced manpower, utilization of web scrap, 24/7 production capability, reduced production costs, reduced floor space requirements, lower capital investment cost, and a path to manufacturing sustainability.



Quad Series Form Station



The Sheet Accumulator and Conditioning Roll System



The B-Series 2-Stop Oven

B-Series Thermoformers

Specifications	Model B-3036	Model B-4500	Model B-5500	Model B-5060	Model B-5454	Model B-5460
Maximum Mold Size	30" wide x 36" long (762mm x 914mm)	40" wide x 42" long (1016mm x 1067mm)	50" wide x 50" long (1270mm x 1270mm)	50" wide x 60" long (1270mm x 1524mm)	54" wide x 54" long (1372mm x 1372mm)	54" wide x 60" long (1372mm x 1524mm)
Maximum Depth of Draw	4" (102mm) / 7" (178mm) / 10" (254 mm)					
Platen / Index Drives	3 axis servo drive					
Independent Servo Plug Assist Option	1 axis servo drive					
Conditioning Roll Stack/Accumulator	Servo-controlled multiple roll stack configuration					
Oven	Two (2) stop					
Oven / Control Options	Multiple heater types / oven configurations, including custom options available					
Vacuum Pump	63 cfm /112 cfm	112 cfm			180 cfm	
Lubrication	Automatic					
Sequential Cycle Control	Brown TCS System/PLC					

Note: Custom Sizes Available Upon Request

Features and Benefits

- Cuts energy costs by 25-35%
- Reduces manpower requirements
- Minimizes scrap
- Reduces raw material costs
- Cuts space and handling
- Maximizes uptime
- Reduces overall system capital costs
- 24/7 production capability



Leadership Through Innovation, Quality and Service

Serving the thermoforming industry since 1952, Brown Machine has earned a reputation for providing the most innovative, durable and dependable plastics equipment in the industry. With engineering and manufacturing capabilities in Beaverton, Michigan, Brown provides equipment, tooling and services to produce a wide range of thermoformed products in the following markets:

- Disposable Cup
- Food Packaging
- Housing
- Point-of-Purchase Packaging
- Material Handling
- Horticultural
- Automotive
- Lid and Plate
- Recreational Equipment
- Appliance

Today our equipment is producing products from a wide range of materials including:

- Polystyrene
- Polyethylene
- PVC
- Composites
- Polypropylene
- EPS Foam
- TPO
- Acrylic
- APET
- ABS
- Barrier Materials
- PLA

Globally, Brown Machine totally supports its growing capital equipment business with a full complement of:

- Retrofit Kits
- Service: 24-7
- Remanufacturing
- Parts: 24-7

Continuous Thermoformers

Cut Sheet Thermoformers

Horizontal & Vertical Trim Presses

Lip Rolling Systems

Machines for Custom Applications

Tooling, Parts & Service



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A global leader of thermoforming technologies since 1952, Brown Machine LLC engineers and builds a complete standard line of continuous & cut-sheet thermoforming equipment as well as related tooling & peripheral equipment.

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