

For Release: **NPE 2006 – June 19, 2006** (BRO #7973)

Page 1 of 1

Brown Machine LLC, NPE 2006 News (Booth #S1409):

Brown Machine's Vacuum Pulse Circuit Awarded Patent

Beaverton, MI – Brown Machine has been awarded a patent for their vacuum pulse circuit for use in conjunction with independent third motion plug assists. This feature is included on all Brown CS and SRS Series Thermoformers with third motion capabilities.

Brown thermoformers with 3rd motion plug assist also incorporate a vacuum pulse circuit: this pneumatic circuitry provides a momentary pulse of vacuum on the plug assist side to prevent the material from prematurely contacting the lip of the cavities, thus providing better material distribution and virtually eliminating unsightly chill marks. Forming with this circuit is particularly easy when utilized with Brown's patented designed pressure boxes incorporating an external plug assist plate as the plug assists set within their own cylinders; but has also proved beneficial in open pressure box designs with internal plug assist plates.

After attempting to utilize a variety of conventional forming methods to form higher quality cups, Brown Process Engineer Jim Martin devised the circuit to change the traditional process window. In conjunction with Brown Mechanical and Controls Engineering groups, the feature was added within the pneumatic circuit and machine controls. This additional process variable opened the process window and achieved exceptional results.

Leaders in 3rd motion solutions

Brown's patent-pending servo actuated roller screw design, patented vacuum pulse circuit and start-up mode coupled with Brown's patented external plug assist tooling clearly defines Brown as the leader in solutions for thermoforming products with independent plug motion technology.

Brown Machine at NPE 2006

Brown Machine will be exhibiting at NPE 2006 at McCormick Place in Chicago, IL, June 19-23, 2006 at booth #S1409 and can answer your questions regarding independent plug motion thermoforming.

For Release: **NPE 2006 – June 19, 2006** (BRO #7973)

Page 2 of 2

On Brown Machine LLC

As a global leader of thermoforming technologies, Brown Machine LLC engineers and builds a complete standard line of continuous and cut-sheet thermoforming equipment and related tooling/peripheral equipment. Specialty thermoforming systems suited to a wide range of markets (including automotive, recreational, packaging, appliance and various other industrial segments) can be custom built to exact customer specifications. Brown Machine fully supports the thermoforming industry (Brown machine owners and competitive models, as well) with a full complement of 24/7/365 on-call service and parts support.

For more information contact Brown Machine, 330 North Ross Street, Beaverton, MI 48612, Phone: 989-435-7741, fax: 989-435-2821, www.brown-machine.com.

###