

ptions for Automation

In-Line Clamshell System

Description

The most common method of ultrasonically welding clamshell packages is a manual plunge welding system, which requires a bar horn (limited to 10" span) and specialized fixture. The Branson in-line clamshell system provides processors with flexibility and increased processing speed by eliminating the need for manual loading and unloading. Parts are simply scanned through. Adjustments for different configurations are easily made. Figure 1 shows the entire system; Figure 2 shows a close-up of the horn and anvil.

Key Features

- Package width capability: 7" to 15"
- Two variable speed drive motors provide continuous operation of both the rotary sealing anvil and conveyor belt at speeds ranging from 0-65 feet/minute.
- Conveyor adjustment: from 1" below sealing surface to 6-3/4" below sealing surface.
- Variable speed flat belt conveyor (standard conveyor – 12" wide, 48" long).
- In-feed and out-feed nip rollers.
- Simple hand crank fluid-drive lift system to adjust conveyor height for different package configurations (height is adjustable from 1" to 6-7/8").
- Adjustable roller-style edge guide to facilitate product movement.
- Operator controls:
 - a. Power on/off switch with "power on" light;
 - b. Cycle start button;
 - c. Emergency stop button.
- Pneumatic pressure regulator, gauge, filter, and air shut-off valve.
- Frame is 2-1/2" square steel tubing with level-pads for feet.



Figure 1: In-line clamshell system.



Figure 2: Horn and anvil sealing a clamshell.

Mechanical Specifications

Pneumatic requirements: 80 psi of clean, dry air

Sealing wheel force against horn face: 1-50 lbs.
(variable)

Dimensions:

Height : 57"

Depth: 30-1/2" to 36-1/2"

Width: 58"

Sealing surface height from floor: 38"

Electrical Specifications

Power requirements: 117 AC, 1 phase, 15 amp.
50/60 Hz

Machine uses a Model 2000bdc ultrasonic power supply (available in 20 or 30 kHz)

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