

The Valpak[®] Manufacturing Center:

**SHOWCASE OF
AUTOMATED PRINT
PRODUCTION FOR THE
21ST CENTURY**



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ROBOTIC MAIL TRAYING CELL:

CapStone Technologies www.captechno.com

In a plant that produces more than 500 million envelopes annually, simply placing the envelopes into USPS mail trays presents an enormous challenge. Each of the nine collators installed by BÖWE BELL + HOWELL can output more than one ton of mail per hour; all of which must be trayed and delivered to the next stage of production in another area of the facility. Valpak recognized this back-end function as a significant opportunity for cost savings.

CapStone Technologies, a business engineering firm specializing in process optimization exclusively for the print/mail industry, collaborated with BÖWE BELL + HOWELL to develop an automated solution utilizing robotics. The result, the plant's robotic mail traying cell, is an innovation applied for the first time in the industry as a key component of the Valpak project. The robotic mail traying cell improves efficiency by automating the following tasks:

- handling empty USPS mail trays at



the collator

- sweeping envelopes from the collator into USPS trays
- delivering loaded USPS trays to the next work area in the plant

It does so by utilizing:

- a four-bin stacker unit at the collator output, accumulating envelopes in sorting bins by tray
- a de-nester unit presenting single, empty USPS full- and half-trays from a queue
- a robot with specialized end-of-arm tooling to sweep envelopes from the bins into empty USPS trays presented to

it by the de-nester unit

- a tray tagging zone, to convey filled trays so that tray tags can be inserted. Trays requiring rework are staged until they have been completed.
- an exit conveyor presenting completed mail trays to the next stage of production

By integrating directly with output from the collators, CapStone's robotic mail traying cell eliminates formerly non-value-adding activity for sustainable savings. The benefits to Valpak include:

- reduced labor and peripheral costs
- optimized collator net throughput
- centralized tray staging and handling to consolidate related operations ■

“Selected as part of the agreement with BÖWE BELL + HOWELL, **CapStone customized the design of the robotic mail traying system** to meet Valpak's specific criteria.”