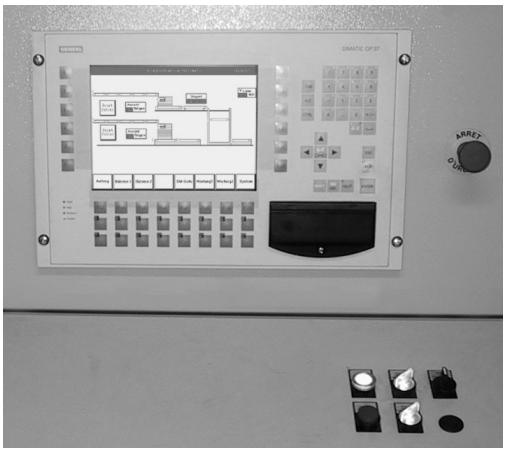
STACKER

Corrugated Stacker Control



UNICO

STACKER

Corrugated Stacker Control

Overview

Unico's stacker control provides superior automation for corrugated stackers. The system incorporates backstop positioning, board tracking, brush control, belt speed control, order and pile changes, as well as remote diagnostics via modem. The system includes variable-speed drives, a programmable controller, a Profibus remote I/O station, and a color human-machine interface (HMI).

Order Data

Order data is stored in the HMI. Order data provides:

- Input and storage for two separate orders including board thickness, overlap factor, number of sheets per pile, and cut length
- Order change is initiated by a signal

Status Information

- Current number of sheets
- Manual or automatic operation
- Current speed
- Status and error messages

Backstop Positioning

The backstop is positioned forward/reverse using an AC motor. Sensors include a pulse generator, limit switches, and a reference switch. Backstop control provides:

- Manual operation from the operator desk (+, ++, -, --)
- Manual start positioning to current cut length
- Automatic referencing
- Automatic positioning to the next cut length during an order change when the stacker table is down and the pile is out
- Collision supervision using a light barrier
- Control of the motor brake in standstill
- Display of the current length adjustment at the operator desk

Brush Control

Machine control desk

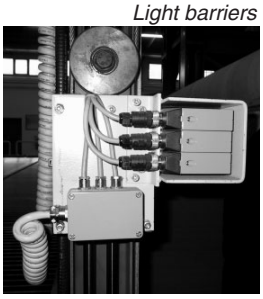
Automatically lifts and lowers from one to five brushes to control board movement behind the cutoff. Brush control provides:

- Manual lifting of all brushes through the HMI
- Manual lifting and lowering of selected brushes through the HMI
- Existing switches at local control board remain operational
- Automatic lifting of all brushes during an order change
- Automatic lowering of one to five selected brushes depending upon speed and sheet length
- Parameter setting for automatic functions in HMI

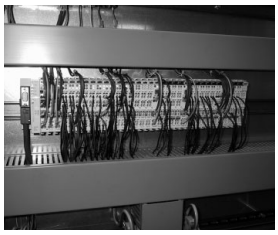
Overview *(continued)*

PLC in main control desk

Light barriers



Remote I/O station



Order Change

An order change is initiated by a signal from the existing order change control. The order change:

- Tracks the last sheet by means of proximity switches
- Starts the separating device synchronously with the last sheet
- Starts increasing belt speed for separation
- Sets an output signal for evacuation when the last pile is completed

Pile Change

A pile change occurs automatically when the specified number of cuts is achieved. A pile change can also be manually initiated via a push button.

Belt Drives Speed Control

Current line speed is set via an analog command signal. Command speed is output individually to every belt drive. Belt drive control provides:

- Belt separation controlled by overspeeding to achieve the requested gap
- Belt overlap controlled by lowering belt speed to achieve the requested overlap
- A light barrier that detects boards and stops all belts if no boards are present
- Manual evacuation—all belts accelerate to evacuation speed
- Automatic separation upon pile change
- Individual speed control for every belt during a pile change
- Parameter settings (length of belts, simulator speed, cut signal) and diagnostics via the HMI

Line Speed Control

An output signal will command line speed to decrease line speed if:

- A pile change is started, but the stacker table is not in stacking position
- A collision occurs during a pile change or an order change

Options

- Automatic data transmission to a host computer via a serial interface or field bus
- Receipt of order data and transmission of production data

For further information, please contact us.

8211 11/06

UNICO–Worldwide

Corporate Headquarters
UNICO, Inc.
3725 Nicholson Road
P. O. Box 0505
Franksville, Wisconsin
53126-0505
USA
voice: 262.886.5678
fax: 262.504.7396
www.unicous.com

United States
Wixom, Michigan
248.380.7610

New Lenox, Illinois
815.485.5775

Sandy, Utah
801.942.2500

Canada
Mississauga, Ontario
905.602.4677

South America
El Tigre, Venezuela
58.283.241.4024

Europe
Milton Keynes, England
44.1908.260000

Wilnsdorf, Germany
49.2739.303.0

Asia
Osaka, Japan
81.66.945.0077

Beijing, China
86.10.6218.6365