

Smart Web AOC Shear Drive





Overview

Unico's Smart Web AOC Shear Drive can be use as a stand-alone drive or as part of multidrive rotary web-severance system on a corrugator's dry-end used during automatic-order-change sequence (AOC) or scrap chop-out requirements. The drive uses the same drive-control algorithm as used on the Unico rotary cutoff knife drives and is therefore superior to other drive packages that are typically used.

Hardware

The drive system consists of a Unico 2400 Series flux vector AC drive and a properly sized AC induction motor. A parallel interface module with 32 points of optically isolated, configurable I/O is supplied with the system. Optional communication interface modules can be supplied that support high-speed communication protocols. The same functionality and performance can be offered with the 1100 Series drive platform with some limitations on hardware-mapped I/O and high-speed serial communications.

Software

The software provided in the drive is Unico's standard embedded RCO software with additional, pre-engineered UEdit® shear functionality. The shear portion of the program can be modified using standard IEC 1131 ladder diagrams and function blocks to further customize the drive for a particular installation.

Interfaces

Setup and maintenance is done through the same keypad/display as used for drive parameter access. Storage, retrieval, and adjustment of setups can also be done remotely the ControlNet, Remote I/O, Modbus Plus, Ethernet, or Profibus protocols and the appropriate interface module or with a remote-mounted HMI.

Features

Chop-Out After Line Stop

The system provides a means by which the shear will automatically chop out a preset length of material after the line has stopped for a selectable time period.

Chop-Out Wet-End Scrap

The shear will track scrap material when initiated by a push button or other wetend signal and chop it out when it reaches the shear.

Automatic Reference/Homing

Upon power-up, the shear will automatically go to a home position. The system readies itself for the first chop-out without operator intervention.

Scrap Jam Prevention

Once a chop-out has been completed, the shear drive will not allow another until enough material has passed into the dry end. This eliminates jam-ups caused by short lengths of material getting stuck between the web shear and the cut-off knife.



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Inputs & Outputs

All inputs and outputs are user-enabled and are mapped to hardware I/O points to allow customization of the control. They are also accessible through a high-speed serial communication link.

Inputs

- shear enable
- single cut
- continuous cut
- · wet-end scrap track
- blower thermal OK
- motor thermal OK

Outputs

- shear enabled
- shear ready
- cutting
- scrap flap open

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Specifications subject to change without notice.

10/03

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