4 Gold Mine Road
Flanders, NJ 07836

March 15, 2006
Quotation: Q030306A-Rev.1
**PO# 7948**
**Job # M06034**

***WORK ORDER***

## Item 1

(1) ***Model 645FC-60" Duplex Center Winding Slitter/ Rewinder in accordance with the following specifications*:**

## SPECIFICATIONS:

| | |
|---|---|
| Web Width: | 60" Maximum |
| Rewind Diameter: | 18" Maximum |
| Web Speed: | 500 FPM Maximum |
| Slitting: | Razor in Nest |
| Slit Widths: | ¾" Minimum |
| Core Size: | 3" ID x 3/8 wall - Paper |
| Winding Method: | Lock core<br>Center Winding |
| Materials: | Vinyl Products |
| Tension: | 2 PLI |
| Drive System: | (1) Motor - AC Drive system, **460/3/60**<br>Main operator controls mounted on the front (rewind) side of the machine, an auxiliary station is mounted in the rear (unwind) |
| Pneumatic: | 90 PSI factory supply provided by customer. Supply must be clean and free of all contaminates including oil and water, prior to connection. Failure to comply may void component warranties. |

## REWIND

- (2) Fixed position rewind stations for *Duplex - Center winding*.

- Each rewind station includes:

  • (2) *Crossbeams* are located near the rewind stations for mounting the optional top riding rolls.

  • Quick acting - *outboard supports* are provided support the cantilevered rewind mandrels while the machine is in operation and swing out of the way for easy unloading of the finished product. The supports are interlocked with the drive system so as not to allow the machine to run without the supports in place.

- *Automatic rewind tension control* using a non-contacting sensor to sense roll build up and automatically adjust air pressure to rewind clutches as the rewind diameter changes. Tension/ Taper settings are adjustable through the operator control station.

## LOCK CORE REWINDING

- (2) Cantilevered - 3" Diameter *air expanding rewind mandrels* for lock core rewinding, flange mounted with outboard bearings. External element type.

- (2) ***Montalvo*** multi-padded *pneumatic clutches* are provided to control tension at the rewind when lock core winding.

## SLITTING STATION

- (1) *Slitting trunnion* for use with razor slitting is included and consists of the following components:

  - (1) Nest roll assembly.

  - (1) Hex bar for retaining individual razor holders. The trunnion beam pivots up and down for engaging the web. Stops are provided to set blade penetration. A guard is provided for operator safety.

- (12) *Individual razor holders* for standard double-sided blades. Blades not included.

## WEB TRANSPORT

- Cork tape covered *pull rolls* are provided to pull the web through the rewinder and isolate tension between the unwind stand, the slitting process and the rewind stations.

- *Idler rolls* are dynamically balanced and use free running bearings for smooth operation. Idler rolls to be of dead shaft design. Aluminum construction. Cork tape covered.

## DRIVE & CONTROLS

- (1) *One motor drive system* to operate at **460/3/60** packaged, tested and installed by ***Phoenix***, includes:

  * All electrical components are mounted on the machinery and pre-wired at the factory. The customer will be required to provide a main power supply drop to the drive cabinet only.

    - (1) 10 HP Drive, ***Marathon*** vector motor, TENV.

    - (1) NEMA 12 Machine mounted, line control panel with the following:

    - Main breaker with external handle
    - Line reactor
    - Dynamic braking resistor
    - Electrical components deemed necessary by the process.

  - (1) Drive system:

    - (1) 10 HP ***Eurotherm (SSD)*** AC Vector Drive.

  - (1) NEMA 12 Main guard mounted, operator control station with the following:

    - (1) Line Start push-button (AB w/green pilot light)
    - (1) Line Stop push-button (AB red-raised)
    - (1) Jog push-button (AB yellow)
    - (1) E-Stop push-button (AB mushroom- maintained)
    - (1) Reset push-button (AB w/white pilot light)
    - (1) Line speed potentiometer
    - (1) Electronic pre-determining, two preset counter for stopping the machine at desired lengths and line speed functions.

## Item 2

(1) ***Lift out, shaft type unwind stand, integrally mounted to the rear of the slitter/ rewinder in accordance with the following specifications*:**

## SPECIFICATIONS:

| | |
|---|---|
| Web Width: | 60" Maximum |
| Unwind Diameter: | 24" Maximum |
| Roll Weight: | 1000 lbs. Maximum |
| Core Size: | 3" ID x 3/8 wall - Paper |

## UNWIND

- (1) Pair of heavy-duty *safety chucks* locate the airshaft and support the unwind roll.

- (1) 3" *Unwind airshaft* (lug type) with hardened square ends for mounting in the provided safety chucks. Inflation gun/ coil hose/ regulator assembly provided.

- *Slack edge adjustment* to take up any "baggy" edges that come off the unwind roll. This assembly consists of a fixed idler roller with one end that pivots in a flange bearing, and the other end is adjusted vertically or horizontally with a hand knob and threaded rod. The unit will make up for any difference in tension across the face of the mill roll.

- *Pneumatic brake* controls unwind tension and is fully guarded. A spool valve is located at the unwind stand to allow the operator to disengage the brake when loading a new master roll.

## WEB GUIDE

- *Manual edge guiding* is provided. Handwheel operated though linear bearings.

## UNWIND TENSION CONTROL

- *Automatic unwind tension controller*, ***Dover Flexo*** "WebHandler" controller and tension transducers. Manual and automatic modes. Installed and integrated into the unwind stand.

## INTEGRATED SPLICE BOARD

- *Web splicing station* located within the unwind side plates, constructed of flamecut and precision ground steel plates, with a structural steel table. The board has (1) razor cutting groove perpendicular to the web. The web is held in place during splicing with rubber faced, pneumatically operated clamps. The clamps are interlocked with the drive system to prevent accidental operation.

- *Idler rolls* are dynamically balanced and use free running bearings for smooth operation. Idler rolls to be of dead shaft design. Cork covered, aluminum construction.

## MODEL 260 UNLOAD TREE

- The *unload tree* consists of a round steel upright welded to a heavy structural steel tubing with clearance holes for floor mounting. (2) Mandrels mount on cantilevered bars for unloading the slitter. The tree pivots way from the machine for unloading by lift table, fork truck or personnel. (18” Diameter capacity).