

September 25, 1995  
**PACKING LIST**  
J D # 559324

**SOLD TO:**

REXAM  
2909 E. 79th Street  
Cleveland, OH 44104

Cust P.O. #15805

Via: TBD

**SHIP TO:**

REXAM  
2909 E. 79th Street  
Cleveland, OH 44104

Area Sales Mgr. Carl Lindsey

Accept. Date 5/15/95

**PACKING LIST**

**CONSTRUCTION** - The Model 800GB is designed for continuous 24 hour, seven day operation in a manufacturing environment. All side plates are of ground steel plate, finished 1 3/4 inch thick supported by heavy duty flanged torque members formed from thick wall rectangular tubing. All cast iron components are of grade 65-45-12 ductile iron. Sheet metal work is minimum 14 gauge (0.075 in. thick). Grade 5 high tensile bolts are used throughout. All fastenings are inch dimensions.

The design takes full consideration of maintenance requirements including proper provision for replacement of belts, bearings, motors, valves and so forth. Tapped holes for lifting and jacking purposes are provided where necessary. Proper access for maintenance is provided. All rolls are precision balanced dynamically to their operating speed.

**SAFETY FEATURES** - The Model 800GB is constructed in full compliance with all applicable U.S. safety standards in both mechanical and electrical areas. Emergency stop cables are located at the front and rear of the machine and over the winding drum. All individual razor holders and shear knife holders are guarded. At least four inches of clearance is provided between all pull rolls and idler roll surfaces to allow safer operation and elimination of pinch points. It also enhances ease of threading the machine. All electric and drive components are totally guarded. All guard doors are interlocked into the machine stop circuit. Lockout disconnects for all energy sources are provided (air and electricity).

**THE MODEL 800GB** - is a duplex center surface slitter rewinder which can unwind, slit and rewind a wide range of materials. This is accomplished by maintaining control over the tension of the product throughout the machine.

**SPLICE TABLE/INSPECTION STATION** - A splice table/inspection station is provided to allow the operator to spot and remove flawed material in order to ensure a quality product. It also provides an easy way of joining the existing web to a new web when making master roll changes or after removing defective material. Properly made splices will protect the knives on the slitter as well as protect secondary operations such as printing, laminating, or die cutting, from damage.

**SLITTER** - Leaving the unwind or splice table/inspection station, the web passes over a series of pull rolls and idler rolls. Tension is set through the slitting section by means of one driven pull roll; prior to the slitting section and the winding drum, after the slitting section.

Slitting itself can be accomplished by kiss shear.

**REWINDING** - There are three methods of rewinding available with the Model 800GB. Surface rewinding is standardly provided for handling materials with high tensile strength, such as packaging, label stock, paper and board, and laminates. Center surface rewinding is also provided standardly to handle slippery materials on material with gauge bands. Optionally, a minimum gap mode could be provided for rewinding of off-caliper material or material that is sensitive to pressure. The Model 800GB will be capable of rewinding both directions.

**DIFFERENTIAL REWIND** - The 800GB uses a unique, proven system of cores and spacers on each mandrel. Spacers are keyed to slide free axially on the mandrel, while restrained from rotating. Air operated thrust pressure exert a controlled squeeze on each core and adjacent spacers. The adjoining faces of the cores and spacers act as individual slip clutches, and driven torque on each core is directly proportional to the axial pressure exerted. Each slit strip is then free to wind at its own speed and tension, regardless of the size or conditions of the adjacent rewound rolls. Regardless of caliper variation, roll density is consistent.

Dual differential rewind tension controls, two for each mandrel, is provided. This permits a total of four different slit widths, two on each mandrel while maintaining desired tension on each rewinding roll. No adjustments are needed during the run, although initial settings can be modified while running in any or all tension zones.

**LOCKED CORE REWINDING** - Locked core winding could provide an alternative to differential winding, when attempting to rewind one large roll or multiple rolls of material with uniform thickness. An air expanding rewind mandrel is used to "lock" the rewind core in place, so that there is no rotational slip between the rewind core and the mandrel.

**THE MODEL 824DRD** - Unwind is of the moving pedestal type. Welded steel pedestals are carried on a platform which moves to accomplish web guiding. The position of both pedestals is adjustable to accommodate cores of different lengths.

**CHUCKING** - The Model 824 is a shaftless unwind stand. Cores are held in chucks designed to suit customer unwind cores carried directly on the pedestals. The pedestals themselves travel on a stationary base with linear bearings and are positioned manually. Chucking and unchucking is set on both sides pneumatically with maximum movement of 7 inches.

**DRIVE** - A 30 HP DC regenerative drive is mounted to the headstock of the 824DRD. The regenerative drive will be used for low tension, sensitive materials on it's own and with the brake for heavy materials.

**BRAKE** - A multi-pad air cooled, air operated converter brake, suitably sized for the specified duty is provided on the tailstock and will be used for high tension materials. The brake is fully guarded. The brake is piped with high temperature plastic tubing.

**TENSION CONTROL** - A pivoting arm type, low inertia high storage dancer assembly is mounted on the splice table. The dancer system provides closed loop control of the web tension and smooths variations in web speed caused by out of round mill rolls. Tension is set through low friction cylinders acting on the pivot tubes and supplied through a quick exhausting regulator mounted close to the cylinders. This arrangement ensures uniform tension throughout the dancers range of movement. The dancer system provides tension control to both the pneumatic brake and regenerative drive jointly.

**ROLLS** - All rolls are precision balanced to 0.02 oz. in/lb at 1000 rpm, dynamically at their operating speed. The Model 824 is fitted with an idler roll of the live shaft type carried on low friction sealed bearings for minimum rolling resistance. The dancer roll is fitted with gudgeons running in small diameter bearings carried on the dancer arms. An idler roll with bag edge adjustment is also provided.

**GUIDING** - Web guiding is achieved by moving the entire unwind assembly in response to signals received from the guiding system. An actuator moves the pedestals. The guiding head is correctly positioned close to the last idler to ensure that guiding will not be affected by instability of the web at high speeds.

**CONTROLS** - Essential machine controls including guider and brake controls are conveniently located on the brake pedestal. A remote speed pot can also be supplied, as an option, to control machine speed.

Emergency stop controls are mounted on both pedestals.

### **MODEL 800GB SPECIFIC CHARACTERISTICS**

**MATERIAL:** -Paper/Film/Scrim laminate .009"  
Film/Scrim/Foil Laminate .009"  
Kevlar Foil Laminate up to 65 mil

**SLIT WIDTHS:** - 10" to 80"

	<b><u>Customer Requirements</u></b>	<b><u>Machine Capacity</u></b>
<b><u>UNWIND:</u></b>		
Maximum core length	84"	84"
Maximum unwind diameter	50"	50"
Maximum total side register	±6"	±6"
Maximum tailstock movement	7"	7"
Maximum roll weight	3500 lbs	5000 lbs
Maximum unwind tension		8 PLI
<b><u>REWIND:</u></b>		
Maximum untrimmed web width	84"	84"
Maximum rewind diameter	50"	50"
Rewind core inside diameter	3"	3"
Rewind core outside diameter	3 1/4"	(min. 3 1/4")
Maximum machine speed	2000 FPM	2000 FPM

Actual operating speed may be limited by type of material, slit width or core condition.

Maximum rewind tension at O.D. of 3" core	12 PLI
Minimum rewind tension at O.D. of 3" core	0.25 PLI

### **UTILITIES:**

Electricity	460/3/60
Consumption	200 AMP/Phase
Air	90 PSI
Consumption	4 CFM
Total Machine Weight	22,000 lbs

1. (1) Model 800GB Level-4 slitter and duplex surface-center rewinder, with three motor D.C. drive system, as generally described in threading diagram #756F304 Revision 3 attached.
- 1.1 Programmed dual differential rewind tension controls.  
  
The torque on each rewind mandrel is regulated for the correct tension pattern during the rewind process. Differential cylinders are on each side of the machine. Air operated latches with safety interlocks also supplied.
- 1.2 Provide mounting beam to dovetail for Tidland Class III knife holders and manifold with tapped holes for maximum possible number of class III knives.
- 1.3 Female knife shaft to be 5" diameter and cantilever design.
- 1.4 (2) Pair rewind arms each with dual adjustable air cylinders for down pressure control and to raise arms for unloading. Latches interlocked with customer hoist.
- 1.5 (2) Rewind mandrel center supports for 3" mandrels to suit Tidland 800 series mandrels.
- 1.6 5 1/4" diameter, pull rolls, plain steel, cork covered design to isolate tension zones.
- 1.7 (1) 4 9/16" diameter, kiss slitting, idler roll, plain steel, cork covered.
- 1.8 Window in non-drive side frame to view web
- 1.9 (1) 5 1/8" diameter spreader roll assembly V-belt driven, Vari-bow Pu. sleeve - ART (vendor supply scale).
- 1.9.1 (1) Additional idler roll for kiss slitting, cork covered.
- 1.10 (1) Adjustable speed, winding drum, polyurethane, which maintains slitting area tension, reversible.
- 1.11 (1) 2 1/4" diameter, clamp roll, pneumatically operated.
- 1.12 (1) Platform assembly located between the machine and the unwind and/or optional splice table for easy access to each side of the machine. A hinged door will be provided for easy access for threading and maintenance.
- 1.13 Mechanical drive to suit Tidland carbide insert, female knives.
- 1.14 All pneumatic and electrical controls are centralized in guard panel.
- 1.14.1 (1) 3-motor SCR drive system utilizing SSD digital drives, for slip core or locked core winding, consisting of:  
  
(2) 25 HP rewind motors, 1750 RPM  
Blower without filter  
Blower starter  
Blower interlock  
Regenerative braking  
2% speed regulation  
Slip core wind  
Lock core wind  
(2) Line reactors  
  
Drive to be Vee belt with overspeed up to 40%.

(1) 20 HP main motor, 1750 RPM  
Blower without filter  
Blower starter  
Blower interlock  
2% speed regulation  
Regenerative braking  
Linear acceleration and deceleration with separate rates  
Machine stop circuit  
Emergency stop circuit  
Jog speed adjustable  
(1) Line reactor

NOTE: Drive motors and control panel located on the right hand side as viewed from the front of the machine. Drives and panel view are housed in a separate console.

- 1.15 Separate MCE as agreed at 2/17 meeting.
- 1.16 Starters for PCI chopper & interlock chopper off with M-stop, 2 HP - 3/60/460 TEFC motor.
- 1.17 Chopper will be installed under guard, provide hole for trim tubes and light.
- 1.18 Minimum gap winding capability supplied.
- 1.18.1 Automatic mandrel slowdown system and differential control as roll diameter increase on the rewind mandrels.
- 1.18.2 (2) Load meters for rewind motors
- 1.18.3 External pots for changing front and rear rewind positions.
- 1.18.4 (1) Allen Bradley SLC-500 computer control package to reduce machine set-up times to a minimum. The system is based on a programmable controller with analogue outputs, (2) counters and operator interface through an Allen Bradley Panelview 550 with full size screen and touch keypad with LCD display. Up to 40 recipes can be retained in memory and recalled through customers six digit product code. There will be two counter displays.

Panelview 550 to be touchscreen/keypad version.

Machine controls will be designed for easy retrofit of a touch screen based control system.

All enclosures to be NEMA 12. Guard door to be lift off, one piece.

Analogue meters on control panel.

Add gland plate in base of pneumatic contact panel.

### **SPLICE BOARD**

2. (1) Model 206 splice table with surface at 20°. Splice angle to be 90° and 27°.

#### **Complete with:**

- 2.1 Adjustable pneumatic web clamps
- 2.2 (2) 4 9/16" diameter idler rolls plain steel, cork covered.
- 2.3 (1) 4 9/16" diameter load cell mounted idler roll plain steel, cork covered.  
(Location changed per 8/15 memo).
- 2.4 (1) Set of mounting components for ultrasonic edge guide sensing head.

### **UNWIND STAND**

3. (1) Model 824DRD unwind stand as generally described, capable of unwinding in both directions (over or under).
- 3.1 (1) Set of unwind pedestals.
- 3.2 (1) Chucking assembly pneumatically operated.
- 3.3 (1) Air operated, air cooled brake assembly, mounted on tailstock.
- 3.4 (1) 30 HP DC regenerative drive, mounted on headstock.
- 3.5 Motor to be on right hand side when viewed from front of machine.
- Note: Pedestal to line up with shaftless rewind set-up. 42" minimum slit.
- 3.6 (1) Idler roll assembly, plain steel, cork covered.
- 3.7 (1) Idler roll for bag edge adjustment. The  $\pm 1$ " adjustment will be located on both sides of the roll.
- 3.8 (1) Electric edge guiding system. (See item 4).
- 3.9 (1) Dancer roll constant tension control system, to operate with motor and brake combined, for heavy materials.
- 3.10 (1) Headstock chuck and one brake chuck for 3" I.D. cores.
- 3.11 (2) 1 3/8" wide stepped spacers.

### **ACCU-WEB EDGE GUIDE**

4. (1) Accu-web series 4000 edge guide system, electrically actuated.

### **LOCK CORE REWIND ACCESSORIES**

5. (2) Pair of 3" diameter aluminum air expanding rewind mandrels, Tidland 800 Series

### **SHAFTLESS REWINDING**

- 6. (1) Mechanically expanding 3" chuck and drive shaft housing assembly and  
(1) special tubular steel center support with idler chuck and chucking spindle.  
This arrangement will be applicable for only one 42" - 78" wide cut (700ft)  
trimmed and log wound. Approximate weight of roll is 70 lbs.

### **TIDLAND SHEAR KNIFE ACCESSORIES**

- 7. (1) Tidland Series KA-950 air expanding female knife shaft assembly.
- 7.1 (6) Female knife support spacers, 2" wide anodised aluminum.

### **HARDWARE KIT/DOCUMENTATION**

- 8. (1) Start-up hardware kit consisting of fittings, tubing, hardware, etc.
- 9. Documentation consisting of assembly drawings, schematics, bills of materials, manuals and floor plan layouts. To be shipped with the machine.

### **RAZOR BLADE ACCESSORIES**

- 10. (5) Razor blade holders
- 10.1 (2) #858327 Hex bar, modified length to suit A=84"
- 10.2 (3) Web support sleeves to fit female knife shaft and allow synchronous speed with web.
- 10.3 (3) Dovetail brackets to hold hex bar.
- 10.4 (500) Razor blades (spares).

### **ADDENDUM**

- A. Density input to be replaced by #/MSF (pounds per one thousand square feet).
- B). OP. will not input unwind diameter system will reset diameter automatically when either unchuck button pushed diameter to default to maximum machine to run at slow speed for ten seconds when start button next pushed to allow drive to "learn" true diameter.
- C). Screen toggle buttons to be removed.
- D). Trim nozzles to be 2 1/2" O.D. to suit customer trim system.

**TERMS:** 65% down payment with the order; 15% progress payment during fabrication; 10% after acceptance of machine and prior to shipment; 10% net 30 days after shipment.

**PRICES:** FOB common carrier Cleveland, Ohio - Freight prepaid.

**PAINT SPECIFICATIONS:** Machine will be painted Control Cabinet Dark Blue, guards-Yellow, balance of machine white.

**CORE SAMPLES:** Required as soon as possible in order to maintain the promised delivery.

**WARRANTY:** The items included in this quotation are warranted free from defects for a period the lesser of 12 months from shipment or 2000 hours operation. Defective parts will be replaced free of charge but the cost of installation will be borne by the customer. This warranty is not transferable and does not apply to consumable parts.

**LIABILITY OF SELLER FOR BREACH:** We do not accept liability for either direct or consequential losses incurred by the buyer caused by delays or defects in design or workmanship resulting from work done under any purchase order arising out of this quotation.

Literature to: Vic Chokshi