LEESONA

THE MODEL 994 WINDING SYSTEM

The Solution for Winding Quality Packages with Difficult Materials

The Model 994 system was first introduced to the market for yarn coating applications. The machine is designed and engineered to be customer and application specific. Numerous options are available for simple to the most demanding processes. The Model 994 winding system has been often copied but never duplicated.

Leesona

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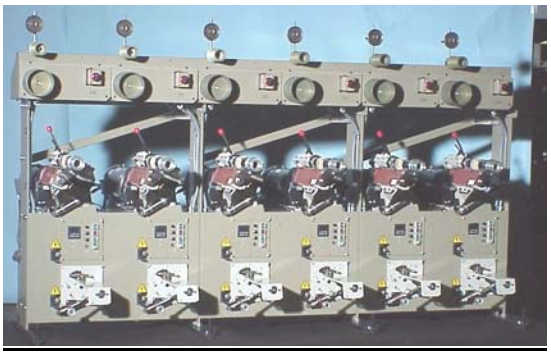
Model 994 Major Features

The machine consists of both a GODET SYSTEM and a TAKE-UP SYSTEM. The combination of these components allows for the machine to pull the material from a process or supply creel and then wind the material into a precision wound high quality package. The integrated godet system eliminates the "pull tension" from the process or creel and supplies the material to the winding head at near zero tension. The take-up system then winds the material and applies any desired tension. Tensions as low as 10 grams or up to 10 kg. are possible with the Model 994. The combination of these systems allows for winding of the packages at a tension optimal for the product and desired package configuration and density.

Each godet in the Model 994 system is individually powered. This includes the motor, motor drive, belts and pulleys plus a speed controlled regenerative D.C. drive. This individual system allows for complete speed adjustment, acceleration and deceleration for each yarn end. The regenerative D.C. drive provides stable speed control and holdback capability where the winding tension is greater than that of the process or coating operation. The regenerative drive system prevents the speed of the godet from increasing to match the torque of the take-up system.

The tension compensated take-up will match the speed of the godet system and will deliver constant or profiled winding tension throughout the package build. Tension is adjustable by means of springs or pneumatics and is controlled with a LVDT (Linear Variable Differential Transformer). The take-up motor drive system is connected to this tension loop system which in turn transmits a voltage to the drive circuitry to accelerate or decelerate the spindle drive motor.



	Standard	Metric
Width per 2-positions	34.75 inches	882.65 mm
Height	76.10 inches	1932.94 mm
Depth	41.25 inches	1047.75 mm
Weight	919.00 Lbs	454.05 Kgs
Max. package Diameter	13.50 inches	342.90 mm
Speed range	25 – 1250 YPM	23 - 1144 mpm
Tension range	30 gms to 10KG	29- 98 Newton
Tube holder sizes	2.875-5.625 inches	73 mm to 142.875 mm
Traverse lengths	5.5 to 12-inches	139.7 to 304.8 mm

Optional Features

To best meet your process and winding requirements Leesona offers a wide range of optional features. These options include air tensioning and head pressure, programmable yarn tension and head pressure (mechanical or optional electronic). These features greatly improves the quality and repeatability of package formation from spindle to spindle. A digital dual pre-set electronic counter for measuring speed and length is also available. The counters are can be pre-scaled and set to measure in many different modes. The counters can be set to stop the system at the desired point to allow for exact metered length packages.

Electronic Wind Ratio Control

Most firms use a "standard" wind ratio for their products and change ratios only when absolutely necessary. The Model 994 can be equipped with an "**intelligent**" servo-motor to drive the traverse mechanism. This servo-motor is controlled by Leesona software and provides complete control and adjustment of wind ratios. Wind ratios can be changed instantly without the need for installing new gears or belts. Changes can be made to a single position or even a group of winders within a large installation. The electronic wind ratio control is available on new machines or offered as a retro-fit kit for earlier model Leesona winders.

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