GlueLogix Servo Driven Rewinder

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1. Introduction

Many RFID processes like encoding work best in stop-start motion. The most common press and rewind equipment does not stop to allow encoding of one and only one RFID tag, especially when tags are small or closely spaced.

The GlueLogix Servo Driven Rewinder is the industry's best choice for read screening received RFID inlays and encoding finished labels.

1.1. Change History

Rev A, 29Jun2012: Original

Rev B, 13Jun2013: Updated after initial shipments

Rev C, 25Sep13: Updated speed rating after reduction gear changes.

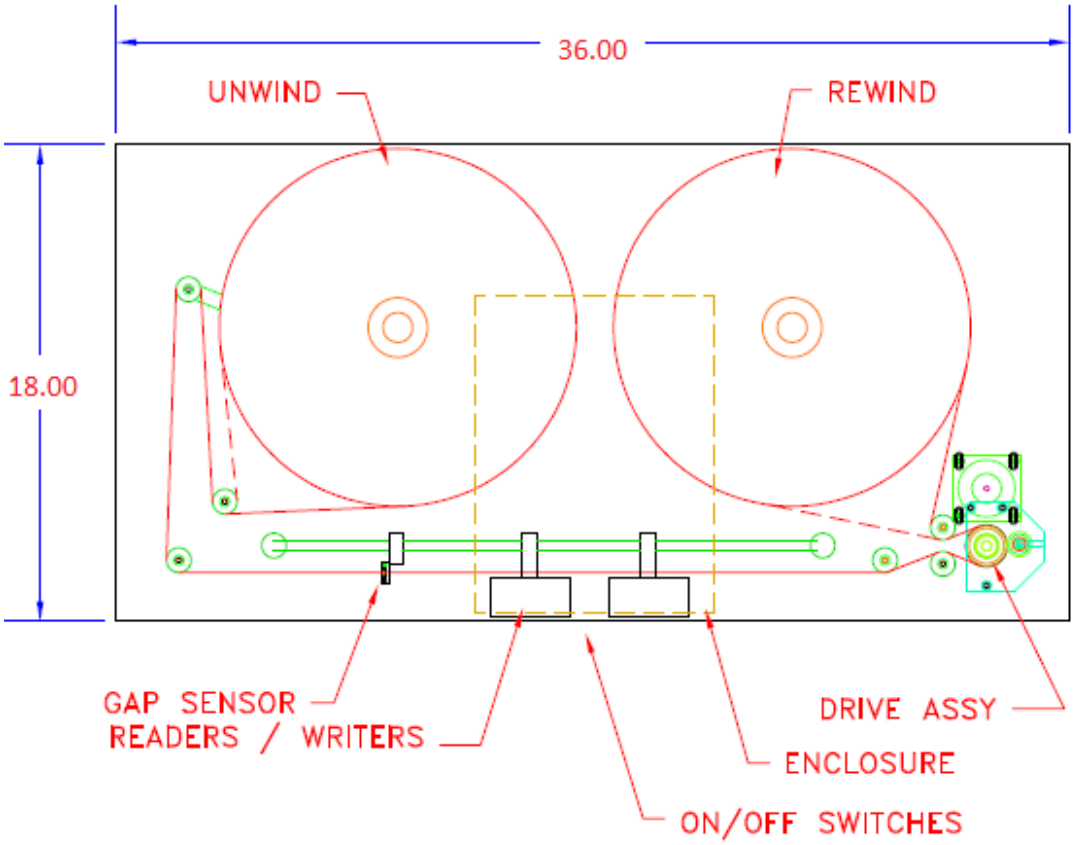
2. Rewinder

Key to the success of this system is a new rewind mechanism, jointly designed by GlueLogix and a North Carolina automation contractor. The new machine is designed with a number of features that make it ideally suited for rewind processing of RFID devices:

- A servo driven nip provides accurate positioning, unlike standard DC motor rewind tables
- The servo also provides fast acceleration, unlike standard DC motor rewind tables
- RFID components are be mounted and tested at the factory, unlike more common LineLogix retrofit installations
- The 14 inch height and 100 pound weight allow use on a sturdy table or cart at the client site.
- Since LineLogix controls the servo, a high level of integration is possible for a wide variety of applications.

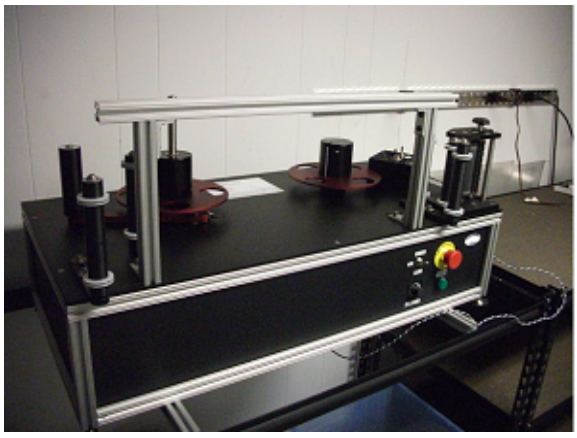
GlueLogix is shipping this design as of June 2013.

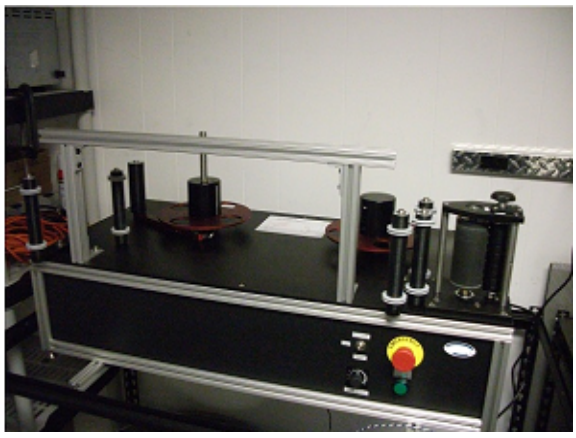
2.1. Diagram



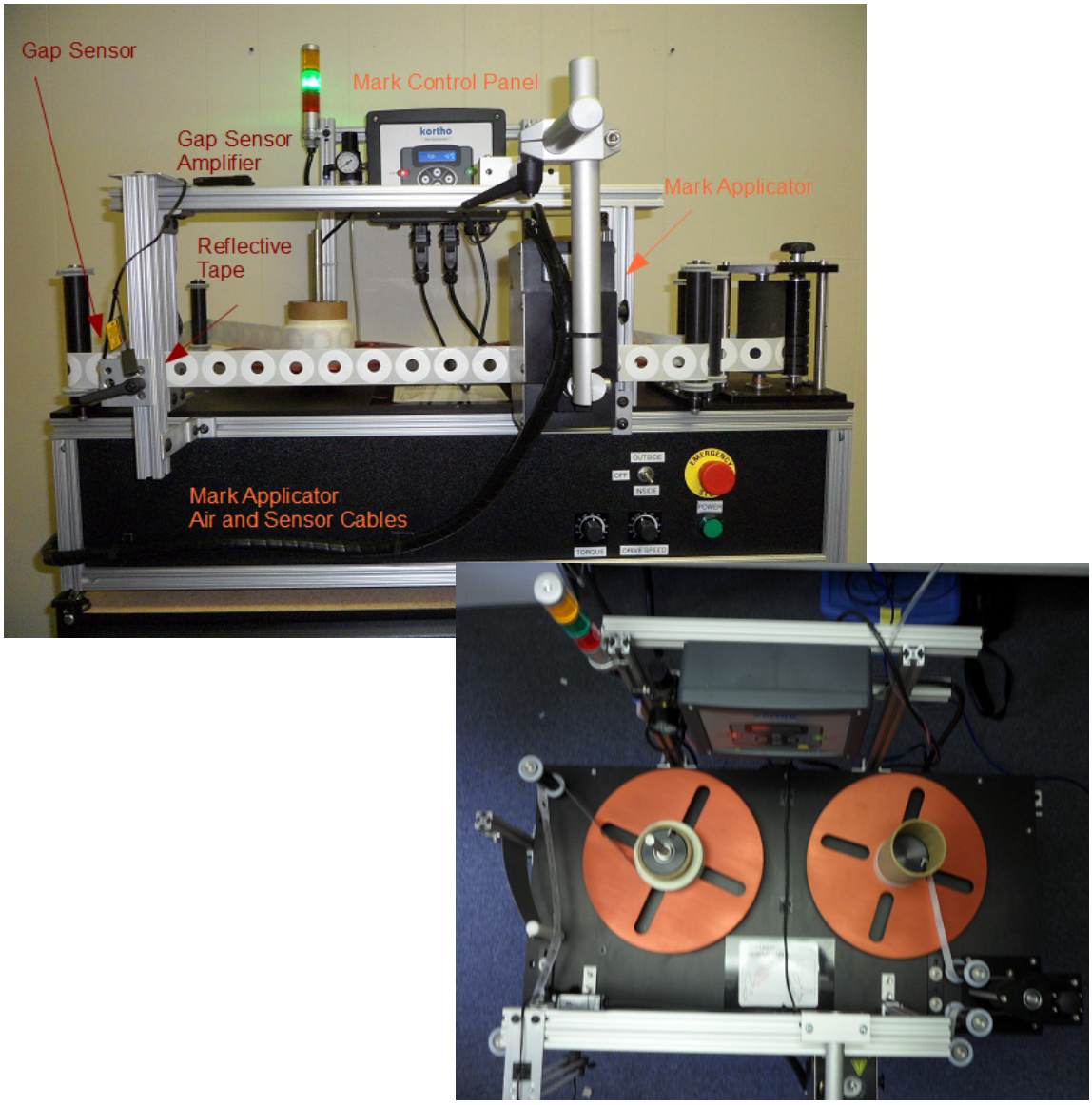
2.2. Pictures

These photos show the prototype, July 2012. Production units handle larger rolls and have slightly different controls. For delivered systems, sensors, markers and RFID antennas are mounted to the top and front rails.





This is a fully loaded system with Kortho imprinter and custom sensor. These components are not normally included in quotes. The photos show the kind of customization possible with the GlueLogix Rewinder.



2.3. Links

http://www.gluelogix.com/LineLogix.shtml#Rewinder

http://www.gluelogix.com/UhfReadTestSixInchTag.wmv

http://www.gluelogix.com/NfcSingulatedEncodingOneInchWetInlays.wmv

http://www.gluelogix.com/UhfSingulatedEncodingSixInchTag.wmv

3. Stands

For ease of shipping, the Servo Driven Rewinder is provided without legs, intended to sit on a sturdy table or cart provided by the end user. The unit weighs 100 pounds, possibly closer to 150 with all required instrumentation and a large roll of tags. Many facilities have suitable table or cart that can be used for the purpose. An office table is not a suitable stand for something of this weight.

The most cost effective stand is easily made from a heavy duty shelf unit, typically sold at home stores. These units advertise themselves as workbench or shelf units, and are often on sale. The dimension of the shelf must match that of the rewinder – 18x36 inch is standard. Here are two typical listings (neither link constitutes an offer or an endorsement):

http://www.homedepot.com/p/Edsal-24-in-D-x-48-in-W-x-72-in-H-Black-Steel-Shelving-Unit-5-Shelf-MR482472BLB/203800338#.Ugpfxm12nCk

http://www.lowes.com/pd_101932-1281-CR3618_0__?productId=1000525&Ntt=shelving+unit&pl=1&currentURL=%3FNtt%3Dshelving%2Bunit&facetInfo=

4. Specifications

Standard Size	18x36 inch work surface, 14 inch work surface height
Standard Shipping	200 pounds including box weight, 40x28x28 inch crate
Power	One 110VAC 60 Hz, others on special order
Current Draw	Less than 5 amps at full speed (machine only)
Top Speed	200 FPM

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