



System Description

The Flowrap Systems Electronic Film Control system has been designed to provide an up to date, easy to use system of control for plain or printed film on traditional flow wrap machines. The system replaces the traditional film drive mechanism with a single, independently controlled motor. The system was designed to make running printed film completely fool proof. The operator no longer has to worry about how to set the bag length or where the eye mark will cut.

The Flowrap Systems Electronic Film Control system will measure and position the film correctly. Even if the system is set completely incorrectly it will automatically compensate and give accurate film position within 5 bags of starting production!

The electronic system has two modes of operation:

Plain film

If the wrapper is to run plain film the film control system is set to 'plain' and the bag length is simply set by means of increase and decrease buttons. The bag length is displayed on the screen in millimetres.

Printed film

When the wrapper is to run printed film the film control system is set to 'printed'. The film control system will automatically measure the bag length according to the registration marks on the film. The film is then run and the position set (in mm) on the control screen shown here.

Product memory

The system offers a product memory. If this is enabled the operators can select a product name i.e. "Sub roll x 4" for example and the system will load all of the settings for that product. Up to 100 products can be memorised.

System Comparison Chart

We have compared the Flowrap Systems Electronic Film Control system to original manufacturer's systems below.

	Flowrap Systems Electronic Film Control	Ilapak Traditional Film Control
Plain Film	✓	✓
Printed Film	✓	✓
Automatic bag length setting ¹	✓	✗
1 st Bag indexed into registration ²	✓	✗
Product memory for up to 100 products	✓	✗
Film position compensation as reel diameter reduces and film tension increases	✓	✗
Machine stop on film run out	✓	✗
Bag length set in mm	✓	✗
Print position set in mm	✓	✗
Error messages for faulty or dirty eye	✓	✗
Product Counter	✓	✗
Machine speed Display	✓	✗
Optional Machine Power Saver	✓	✗

In addition to the improved line efficiencies generated by quicker product set ups and elimination of errors, the Flowrap Systems Electronic Film Control system offers the following tangible cost-saving advantages over traditional mechanical systems:

1. Reduction of film wastage during product change over
2. Reduction of film wastage during film change and if film snaps or is re threaded

Technical Details

- Packaging specification
 - Bag length 100 – 700 mm (Max 57,000 mm / min)
 - Speed 0 – 500 PPM (Max 57,000 mm / min)
 - Accuracy +/- 1 film registration mark width
 - Film Plain/printed with registration index marks (5mm x 20mm)
- Control specification
 - Processor: Proprietary Flowrap embedded CPU
 - Memory: Up to 100 product programmes stored in PC memory
 - Encoder interfaces: 2 x 32 Bit 2Mhz bandwidth.
 - Digital inputs: 16 x 24V PNP opto isolated
 - Digital outputs: 16 x PNP volt free opto isolated
 - Analogue outputs: 4 x 12 bit opto isolated
 - Display: 2 x 20 character LCD
 - Supply: 230Vac 10A
- Drive System
 - Drive: 0.75 Kw.
 - Reduction system: 3/8” chain drive as per Flowrap machine
 - Motor: 0.75KW motor
 - Feedback: 2 x 1000 (4000 in hardware) PPR Quadrature encoders

The system can also be supplied with an optional Power Saving feature.

The Power Saving feature allows the system to control the operation of the sealing heaters – switching them off during known periods of inactivity.

This has been developed as many machines are left switched on permanently to ensure that the machine is already warmed up before it is required for production. However, the result is that these machines are often left switched on overnight when no production is taking place. This wastes electricity and also means that effective heater element life is reduced.

With the Power Saving feature, the machine can be programmed to switch the heaters off at, say, midnight and back on again at 6:00am.

These times can obviously be adjusted to suit individual shift patterns. There is also an override if the machine were to be required during a period of planned downtime.

Control System Unit



AC Drive Motor Unit



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