



FIFE CORPORATION

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INSTALLATION INSTRUCTIONS

1. General

Fife sensors are specially designed to accurately sense the edge of the material being guided, producing a proportional signal to the servo valve.

2. Guide Point Location

To assure a stable installation with accurate results, the following guidelines should be followed:

A. Unwind With Shifting Idler

The sensor should be fixed and located immediately downstream from the shifting idler. Where it is not possible to shift the idler, a wide-gap photoelectric system is recommended.

B. Intermediate Guide (Kamberoller or Offset Pivot Guide)

The sensor should be fixed in the exit span, which is the span between the guide roll and the next fixed idler. Locating the sensor any place in the half span after the guide roll is satisfactory. It may be necessary to reduce the plane of motion of the material being guided at the sensor. (See paragraph 3.)

C. Rewind

The sensor should be shifting with the rewind stand and located immediately upstream of the last fixed idler prior to the shifting stand. The support for the sensor must be sufficiently rigid to assure stability.

3. Material Flow Through Sensor

The material being guided should normally pass through the approximate center of the sensor gap. Intermediate guide roller motion causes the plane of the material to vary at times more than the gap of the sensor. To reduce this twisting motion at the sensor, it may become necessary to support the material being guided. Loose, baggy edges may also require support at the sensor. When handling very light gauge materials such as films and papers, curling or fluttering of the web or strip may be observed at the sensor. The above conditions tend to reduce the accuracy obtainable, and may also cause instability of the control system. Following are several suggestions for minimizing these conditions.

A. Sensor Supports Material

Just touching or 'kissing' over the arm of the sensor opposite the signal port will improve guiding results.

B. Web Support Fingers

Web support fingers may be installed to support the material, again with just enough wrap to maintain contact.

C. Deadbar Installation

Install a deadbar as close to the sensor as possible, with a minimum wrap (10° maximum) to maintain the plane and support the material. The material must be able to slip laterally across the deadbar. For coated or other materials where possible scratching is a problem, or where the material is tacky and resists sliding, an idler is recommended following the same procedure as a deadbar.

A deadbar is preferred strictly from a guiding standpoint, as it does not have a tendency to steer the material off, in the event of slight misalignment.

4. Hose Connections

The flexible hoses supplied should be used to connect to the power unit. (See Figure Sheet 1-183, paragraphs 3 and 12.) The hose I.D. is critical to the proper operation of the unit, a minimum of 7/16 to 5/8 of an inch being required. These lines should run to the power unit using only gentle curves. Avoid sharp bends. Desirable line lengths are 6 to 10 feet, with a maximum of 12 feet. Any restrictions, such as fittings, etc. should be avoided or kept to an absolute minimum to obtain optimum performance of the unit. It is sometimes desirable to use metal tubing of the recommended minimum I.D. from the power unit to the vicinity of the sensor. Avoid unnecessary fittings or sharp bends. A short length of flexible tubing or hose should then be used for the final connection to the sensor to permit adjustment for the different material widths.

