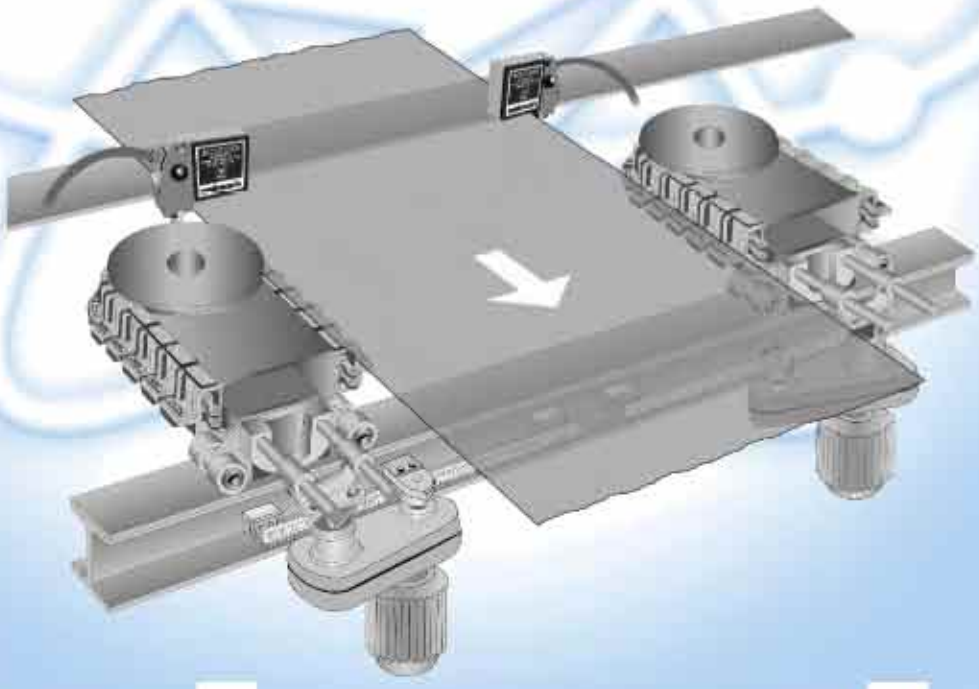


SEMITRONIK

FABRIC INFEED DEVICE
WITH RACK & PINION SYSTEM
FOR STENTER MACHINE

FABRIC INFEED DEVICE

WITH RACK & PINION SYSTEM AND FABRIC EDGE SENSOR CCD OR INFRA-RED

SUITABLE FOR ANY

- ❍ COLOURED
- ❍ TYPE FABRIC
- ❍ SPEED OF THE STENTER MACHINE OF ANY MAKE FOR UNIFORM PINNING

RESULTS IN :

- ❍ ENSURES QUALITY FABRICS
- ❍ ELIMINATES MANUAL LABOUR
- ❍ REDUCTION IN PRODUCTION COST BY ELIMINATING DAMAGE TO FABRIC DUE TO IMPROPER PINNING

✧ UNINTERRUPTED PRODUCTION WITH :

- ✻ RELIABLE AND DURABLE OPERATION
- ✻ EASE OF MAINTENANCE DUE TO BACK-UP OF :
  - ✶ EFFICIENT & PROMPT SERVICE AFTER SALES
  - ✶ TECHNICAL TRAINING BACKED WITH DETAILED TECHNICAL INFORMATION
  - ✶ EASE OF AVAILABILITY OF COMPONENTS

SEMITRONIK manufacturer and exporter for process control systems for textile industry right from fiber to finished fabric.

Only exporter in the **world** with such large range of the products.

FABRIC INFEED DEVICE with CCD or Infra-Red or Optical Edge Feeler which meets todays exacting demands of speed and accuracy with no downtime.

DESIGN

The equipment comprises of pair of positioning drives with pinion and rack assembly with Infra-Red or Optical Edge Feelers, switching amplifiers and power supply units.

The Fabric Edge Sensing System, houses light projector and receiver followed by amplifier.
The amplifier is influenced by pulsed light reflected from the textile web.

The stenter guider with its continuous follow-up at a high speed and maximum transverse force, together with its precise force transmission by rack and pinion for high speed stenters with cloth speed upto 250 mtrs/min.

MODE OF OPERATION

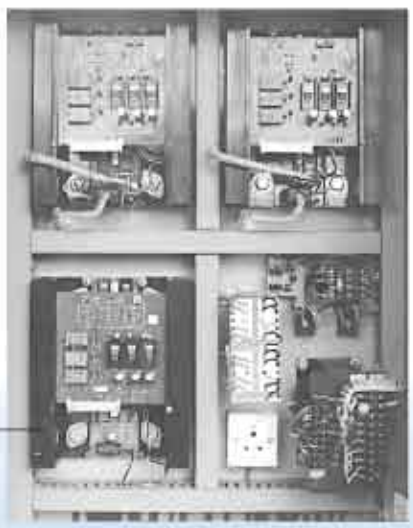
The Infra-Red or CCD Edge Feeler transmits a signal which varies in proportion to the deviation of the edge from a pre-set point.

An amplifier transmits the measured value from the feeler and acts on the control motors coupled to the stenter rails positioning drive.

The Infra-Red or CCD Edge Feelers are intended mainly for knit and woven fabrics without strong selvedge because the edge feeler operates with reflection of light. The contact free sensing of the web edge is suitable for open weave, even with loose infeed. The light source and receiver are above the cloth level and therefore not susceptible to dirt, pattern or colour, or density of the fabrics.

OPERATION PUSH BUTTON WITH FABRIC POSITION INDICATORS

ELECTRONIC PANEL



WITH SPARE MODULE

INFRA-RED SENSOR

Sensor is very compact, being an Infra-Red sensor and **no sensitivity knob is required** even for fabric such as saree, loosely woven superfine fabric, shirting, suiting or dress material of any coloured and structure fabrics. The sensor can work under temperature condition upto 150°C, giving accuracy ± 1 mm. The array of emitters and receivers which ensures proportionate linear output.

- Contactless type fabric edge sensing system makes possible to sense the edge of the fabric whether **thin, thick, fine, superfine, wet, dry, white or black i.e. any type of fabric and in any construction.**
- Auto sensitivity arrangement incorporated **to sense any coloured fabric without manual operation of sensitivity knob.**
- System incorporated with rail position indicators and feedback system for automatic correction of the follow-up speed.
- System very easy to maintain at your end, as all components are with plug-in type printed circuit board or on socket and available in international market.
- The complete technical details supplied with the system.

CONTROL PANEL

The control panel is specially designed to operate on a single phase as well as three phase power supply to meet industrial working condition. The servo power amplifier with velocity feed-back for greater positioning accuracy.
The spare module is incorporated in the same panel for uninterrupted operation of the system for years to come.

- The PCB with SMD of International standard using latest technology (i.e. PTH technology) with green masking and soldered on automatic wave soldering machine makes system MOST SUITABLE FOR ANY WORKING CONDITION, ENSURING DURABLE & RELIABLE PERFORMANCE.
- Power control circuitory with : POWER MOSFETS for :
  - High system STABILITY
  - Lower heat generation, extending life of the components for durable performance.
- EXCELLENT ELECTRONIC BRAKING (Velocity feed-back) results in uniform pinning at any speed with precise operation.
- All cards accessible from front side for ease of maintenance.
- Compact design reduces space requirement for mounting.

GEAR BOX

- Gears in the gear box are of CS, hardened and grounded. Hence gear box life is very very long.
- Specially designed motor of 0.1 kw capable to move static load of heavy entry rail with other attachments such as uncurler, overfeed device, etc.
- Required transverse force for high guiding accuracy.
- High steering power continuous control for fast follow-up.
- The pinion design for rack to take care of any wear and tear.
- Power transmitted without backlash, due to elimination of screw, shafts, nuts, bearings.
- Adapts to all makes of the stentering machines.

INFRA-RED
FABRIC EDGE SENSOR
MODEL DEF / 93

INFRA-RED
FABRIC EDGE SENSOR
MODEL DEF / 99

INFRA-RED
FABRIC EDGE SENSOR
MODEL DEF / 108

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TECHNICAL DATA

Fabric Infeed Device with Rack and Pinion System with CCD or Infra-Red Edge Sensors.

- Operational temperature : 0 -70°C
- Proportional band : 2-12 mm
- Incandescent lamp : 12V 0.5 Amp.
- Infra-Red : 12V 0.1 Amp.
- Weight : ca. 0.5 kg.
- Application : Heat-setting & drying / finishing stenters and for sensing of edge of any coloured and structure fabric.
- Cloth types : Woven and knitted of any coloured.
- Cloth speed : Max. 250 mtr / min.

POWER SUPPLY AND SWITCHING UNIT

- Mains connection : Single phase / Three phase
- Voltage : 200-240V / 440V
- Frequency : 50 / 60 Hz
- Power input : 0.5 KVA

POSITIONING DRIVE TYPE PD-80

- Motor voltage : 24V DC
- Follow-up speed : 260 mm / sec.
- Guiding accuracy : ± 1mm

MODELS AVAILABLE

- **MODEL - FS / 92**
  Fabric Infeed Device with Rack and Pinion System and Infra-Red Digital Edge Sensor Type DEF-93 with auto-sensitivity arrangement.
- **MODEL - FS / 99**
  Fabric Infeed Device with Rack and Pinion System and Infra-Red Digital Fabric Edge Sensor Type DEF-99 with auto-sensitivity arrangement suitable for any coloured and any type fabric.
- **MODEL - FS / 2000**
  Fabric Infeed Device with Rack & Pinion with servo motor and CCD Fabric Edge Sensors suitable for any make and type stenter machine for uniform pinning.
  - The Fabric Edge Sensor available to synchronize with any make and type fabric infeed device or web guiding system with DC motor or pneumatic or hydraulic power pack.

System is supplied with detailed information and circuit diagrams complete in all respect for installation, commissioning and maintenance for reliable and durable performance.

- **MODEL - CFS / 90**
  System consisting of :
  - Electronic control panel houses plug-in type 3 nos. PCB (with one as spare).
    Dimensions :
    W 510 X H 760 X D 230 mm
  - 2 nos. Infra-Red Edge Sensor.
  - 2 nos. Electro-Mechanical Edge Sensor.
  - 2 nos. Push Button Box with fabric position indicators.
    Dimensions :
    W 100 X H 245 X D 59 mm

System can be synchronised with existing Fabric Infeed Device with any make DC motor or AC motor / DC generator set & DC motor with Rack & Pinion arrangement.

Accessories available for such systems :

1) Optical Sensor
2) Input 20V DC or ± 12V
3) Output 2-18V DC proportionate
4) Digital Sensor
5) Input 0-20V DC or ± 12V
6) Output 2-18V DC or -8-0+8V
7) Digital Sensor (DEF-99)
8) Input 0-20V DC
9) Output 2-18V DC or -8V-0+8V
10) E+L Panel KR 38 Cards
11) Plug in Power Supply Card with 13 Pin Connector
12) Motor Drive Card with 21 Pin Connector
13) Relay Inter Lock Card with 25 Pin Harp Connector
14) Field Rectifier Card E+L 0066 (02-014)
15) Mother Board

For further details, contact

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