Fabric Machinery

Automated Width and Length Measuring System
Fabric Relaxing machines
Fabric Inspection Machines
Fabric Length Measuring Machine
PRODUCT LIST OF TEXTILE INDUSTRY MACHINERY

01 Automated Width & Length Measuring system – Vtape
   - Network Base Automated Width & Length Measuring system
02 Fabric Relaxing Machine - Roll to Lap (Fabric Baling Machine)
03 Fabric Relaxing Machine - Roll to Roll
04 Fabric Length Measuring Machine
05 Fabric Inspection Machine - Roll to Lap or Lap to Roll
06 Fabric Inspection Machine - Roll to Roll
07 Fabric Inspection Machine - Lap to Lap

About Us

Hitech Solutions (Pvt) Ltd is a leading engineering company in Custom designed machinery, High-tech research and development and Automation in Textile industry in Sri Lanka. We develop innovative solutions to eliminate shaded garments, relax your fabric before cutting and more innovative products according to the customer requirements.

We continue to be the partner of choice of our customers for our innovative solutions in Auto Guided Vehicle (AGV), Image processing, Automated machinery designing, Machine upgrading, Control panel designing, HMI and ERP software development and Central management tools.
Advantages of the Hitex Length & Width Measuring System

1. Accurate width/length report eliminate length shortages, which reduce rework, re-dying, re transport and customer complaints on length/width shortages
2. Manual measuring of the Fabric width is not required – no labor work needed
3. Manual reports, paper work and Document handling Automated and time/cost savings
4. More measuring points if width; accurate data for cutting pattern design, reduce wastage/shortage.
5. Automatic calculation of Average width, Usable width, Minimum width and Maximum width
6. Error correction factors for Fabric length variation due to time shrinkage & database for saving.
7. Report on fabric with variation along the length

Advantages of the Networked Database

8. Centralized system to recall fabric data and fabric stock summary
9. Measure the machine efficiency.
10. Ease of sharing data with customers and internal staff

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Width detection system &amp; Software, Report generation (PC should be provided by the client) Lifetime License</td>
</tr>
<tr>
<td>02</td>
<td>Vision Camera: 02 units, Adjustable mountings for cameras, Steel structure,USB Industrial Active repeater cables</td>
</tr>
<tr>
<td>03</td>
<td>Encoder interfacing PLC 14 digital input and output Wheel type incremental encoder, PLC cables</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID</th>
<th>Optional Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Networked Database and Central GUI</td>
</tr>
<tr>
<td></td>
<td>GUI is same as the individual system for 03 machines</td>
</tr>
<tr>
<td></td>
<td><strong>One time cost for whole system</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Advantages of GUI</strong></td>
</tr>
<tr>
<td></td>
<td>* Fabric roll data of the whole factory can be logged in a database</td>
</tr>
<tr>
<td></td>
<td>* Minimize the fabric wastage by 1% - 4% by providing accurate</td>
</tr>
<tr>
<td></td>
<td>data about Fabric rolls in the stock.</td>
</tr>
<tr>
<td></td>
<td>* Provide accurate data on minimum, maximum &amp; usable width and length as well.</td>
</tr>
<tr>
<td></td>
<td>* Provide more convenience for cutting operation and Fabric roll selection.</td>
</tr>
<tr>
<td>02</td>
<td>Provide i3 PC and 22 in Display for the system with the relevant software (windows)</td>
</tr>
</tbody>
</table>
**Description**

The project is to install cameras, camera mounting, encoder interfacing card and control software for existing inspection machine.

Additional modifications to the software and the hardware than the given will be charged separately

A proper training will be given to the operators about the machine, system software and handling after the system is fully implemented. The training will include general machine and software handling, system calibration (length and width), report generation, proper maintenance of the computer and other administrative works of the system.

**User Interface**
02. Fabric Relaxing Machine – Roll to Lap (bale) form

This machine is used to convert fabric from Roll form to Lap (Bale) form.
Mainly used
1. When spreading machine need the fabrics in lap (bale) form, if the supplier get the fabric roll form,
2. If the fabric roll is tensioned in roll from, this machine is used to convert fabric roll to Lap (bale) form and keep in stores for 24-48 hours in bale form and use in spreading or re-rolling using the same machine.

Advantages & Features
Reduce fabric shrinkage after pattern cutting
Automation of manual operation (ROI with in one year if currently doing manually)
Variable speed (0-30m/min) and speed not depend on roll diameter
Full forward & reverse run of fabric.
Max. Roll dia. Up to 800 mm.
Edge control via moving the lapping bed (optional) – increase spreading efficiency
PVC Stickered steel rollers to safe the fabric from damaging (Cork – Rubber optional)
Stop at set length
Auto fabric cutter (optional)
Short inspection bed (optional)
Can incorporate automated fabric width/Length measuring system to use all the width of the fabric

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Fabric Relaxing machine: Roll form to Lap form with Fabric length measuring system</td>
</tr>
<tr>
<td></td>
<td>Fabric Width : Up to 2200mm (Customization available)</td>
</tr>
<tr>
<td></td>
<td>Adjustable speed via Variable Speed Drive</td>
</tr>
<tr>
<td></td>
<td>PVC Gripping Stickered rollers to avoid damages to the Fabric (cork rubber tape is optional)</td>
</tr>
<tr>
<td></td>
<td>Powder coated Structure</td>
</tr>
<tr>
<td></td>
<td>Length measuring wheel and Digital display</td>
</tr>
</tbody>
</table>

Price
This Relaxing machine is capable of handling fabric roll from Roll/Bale(Lap) to Roll form.

**Advantages – Features**
- Rolls with constant tension that can be spread immediately on automated spreading machines
- Saving time and store space/ handling.
- This machines add with automated width and length measurement system (VTAPE) to save fabrics.
- Fabric Width from 60cm to 2200cm, (can be customized)
- Provide optimum handling and utilization of tension sensitive fabrics.
- PVC Gripping Stickered rollers to avoid damages to the Fabric (cork rubber tape is optional)
- Automatic Edge control (salvage guider)
- 5.5” Touch Screen to display the length and stop at set length. This increase the machine productivity and use even without PC
- Forward and reverse operation, Auto and manual Operation
- Max roll diameter up to 800mm
- Fabric Auto cutter (to cut the fabric at set length)
- Fabric Width : Up to 2200mm (Customization available)
- Two stage Relaxing fabric using loop and air bed with flow controllable blower
- Powder coated Structure for more durability

---

**Model : HIFR3**

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Fabric Length measuring/ Relaxing machine: Roll form to Roll form</td>
</tr>
<tr>
<td></td>
<td>Fabric Width : Up to 2200mm (Customization available)</td>
</tr>
<tr>
<td></td>
<td>Adjustable speed via Variable Speed Drive (0-30m/min)</td>
</tr>
<tr>
<td></td>
<td>PVC Gripping Stickered rollers to avoid damages to the Fabric Edge control</td>
</tr>
<tr>
<td></td>
<td>(salvage guider)</td>
</tr>
<tr>
<td></td>
<td>Relaxing via Loop and air bed (air flow by blower)</td>
</tr>
<tr>
<td></td>
<td>Powder coated Structure</td>
</tr>
<tr>
<td></td>
<td>Length measuring wheel and 5.5in touch display</td>
</tr>
</tbody>
</table>
Model: HIFR3

Fabric Loop

Air Bed

Fabric auto Cutter

Model: HIFR4 – Basic J loop arrangement

Fabric Relaxing/Length measuring Machine
Model: HIFR4 - J loop relaxing for sensitive fabrics
by Hitech Solutions Pvt Ltd
Sri Lanka
www.hitech.lk info@hitech.lk
Machine is capable of loading fabric in roll form and unload in to roll and bale form. When loading from bale form or transferring to bale form, an empty paper roll should be placed on the free rollers to drag the fabric. Both feeding and unloading rollers are linked and driven by single motor to minimize the tension variation of the fabric.

**Advantages – Features**

Lapping and rolling operation in one machine.  
Stack to keep empty tubes (save time)  
Foot Switch operation for free hand to increase work force efficiency  
Fabric Width: up to 2200mm: can be customized.  
PVC Gripping Stickered rollers to avoid fabric damage  
Powder Coated Structure for longer structural life  
Both rollers are running together from same motor to minimize the relative movements on feeding and winding rollers  
Speed controllable via VSD (also smooth start and stop with VSD for higher machine life)  
Length counter mounted to rolling roller  
5in Touch Display for length display and cut length settings  
Fabric Auto cutter, cutting operation by motor (one button press cut)- Optional Feature  
Polythene roll un-loader. At middle of the machine  
Single phase operation 50 – 400W power usage  
Accuracy for woven fabric is 99.5 or higher, knitted fabric length measuring accuracy vary according to the initial tension of the fabric (97 or higher)  
With optional feature 1 and 2 can increase the accuracy up to 98% or higher

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
</table>
| 01 | Fabric rolling machine with fabric roll in roll out  
Fabric Width: Up to 2200mm (Customization available) |

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>Auto Edge alignment (Straight &amp; uniform roll winding through efficient salvage guider.) increasing productivity of spreading machines</td>
</tr>
<tr>
<td>03</td>
<td>Cork-Rubber Gripping sticker replacement for rollers for better traction with fabric roll and best for sensitive fabrics</td>
</tr>
<tr>
<td>04</td>
<td>Vision Based Width and length measuring and reporting &amp; relaxing system. With lifetime license Including the Vision Cameras and cables.</td>
</tr>
<tr>
<td>05</td>
<td>i3 PC or higher, Windows 7 or higher with two USB 3.0 ports and com port 20” Wide Display (prefer if customer can supply the PC for easy of maintenance)</td>
</tr>
</tbody>
</table>
Advantages – Features

Fabric Width: up to 2200mm:
- Adjustable speed up to 30m/min: can customized
- PVC Gripping Stickered rollers (crock – rubber sticker optional)
- Length Counter: Display in 5.5in touch display, stop at set length
- Back Light Box and upper light
- Foot switch operation to easy on and off
- Auto Edge alignment (Salvage guider) – this make easy of laying operation (optional)
- Automated Fabric Width and Length Measuring System – VTAPE (optional)
- Variable angle inspection table 30-60 degree (controlled by Pneumatic pistons)(optional)
- 30-60 Degree variable angle inspection table, motorized and control via push buttons (optional)
- weight measuring table attachment (Optional)

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Fabric Inspection machine: Roll form to Lap form or Lap form to Roll form</td>
</tr>
<tr>
<td></td>
<td>Fabric Width: Up to 2200mm (Customization available)</td>
</tr>
<tr>
<td></td>
<td>Adjustable speed via Variable Speed Drive</td>
</tr>
<tr>
<td></td>
<td>PVC Gripping Stickered rollers to avoid damages to the Fabric</td>
</tr>
<tr>
<td></td>
<td>Powder coated Structure for more durability</td>
</tr>
<tr>
<td></td>
<td>Length measuring wheel and Touch display for length control</td>
</tr>
<tr>
<td></td>
<td>Fixed angle inspection table</td>
</tr>
<tr>
<td></td>
<td>Top and Bottom lights</td>
</tr>
</tbody>
</table>
This system is for inspection of fabric feed from roll form to roll form. From bale form to roll form also can be archived

**Advantages – Features**

Fabric Width: up to 2200mm:
Adjustable speed up to 30m/min: can customized
PVC Gripping Stickered rollers (crock – rubber sticker optional)
Length Counter: Display in 5.5in touch display, stop at set length
Back Light Box and upper light
Tension Free (controlled tension) inspection and rolling with fabric by driving both feeding and rolling rollers by Motors.
Foot switch operation
Auto Edge alignment (Salvage guider) – this make easy of laying operation (optional)
Automated Fabric Width and Length Measuring System – VTAPE (optional)
Variable angle inspection table 30-60 degree (controlled by Pneumatic pistons)(optional)
Back Light Box and upper light separately on/off for proper inspection light condition (cool while florescent lamps for wide color frequency range) (LED Optional)
30-60 Degree variable angle inspection table, motorized and control via push buttons
weight measuring table attachment (Optional)

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
</table>
| 01 | Fabric Inspection Machine : Roll to Roll
    Fabric Width : Up to 2200mm (Customization available)
    Adjustable speed via Variable Speed Drive
    PVC Gripping Stickered rollers to avoid damages to the Fabric
    60 Degree fixed angle inspection table : Light box & upper light (angle can be customized)
    Speed adjustable uncurler top of inspection table
    Digital Length counter via 5.5in Touch display and stop at set length
    Powder coated Structure |
This Fabric Inspection Machine is capable of handling the fabric from Lap form to Lap form.

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
</table>
| 01 | Fabric Inspection Machine: Lap to Lap  
Fabric Width: Up to 2200mm (Customization available)  
Adjustable speed via Variable Speed Drive  
PVC Gripping Stickered rollers to avoid damages to the Fabric  
30 – 60 Degree variable angle inspection table: Light box & upper light  
Speed adjustable uncurler top of inspection table  
Length counter  
Powder coated Structure |
CONTACT US

Hitech Solutions (Pvt) Ltd
No. 542/10/B, Samurdhi Mawatha,
Biyagama,
Sri Lanka.

Email : info@hitech.lk
Web : www.hitech.lk

Tel : +94714964141 / +94113059058 / +943964141
Fax: +94719378329