



# Textile Machinery Automation & Upgradation



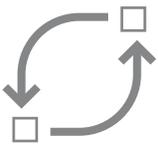
# Automation and upgradation of older textile machines

Textile mills seek continuously to automate and upgrade their older textile machines to improve their performance and to overcome any problems faced with these machines. Some of the typical problems faced with older textile machines are: low productivity, obsolete control technology, frequent breakdowns, increased downtimes, non-availability of spares leading to poor maintenance and stoppage of machines, problems in troubleshooting as the root causes of problems are not apparent, etc.

A.T.E. is a leader in textile engineering with 80 years' experience and deep domain knowledge in textile processes. We have the expertise to successfully undertake automation and upgradation of older textile machines using modern controls and the latest software, as long as these machines are in good mechanical condition. This results in a significant improvement in the performance of older machines – in terms of productivity, quality, and reduction of operating cost.

A.T.E. also offers stand-alone products to upgrade mill productivity and quality: pre-reduced indigo dosing systems for denim manufacturing (bulk as well as portable); and dye and chemical dosing systems for the processing range like CDR, CBR, etc.

## The automation and upgradation projects we have experience with covers:



Replacing all existing electronic/electrical hardware with the latest PLC technology



Replacing old SCADA and HMI systems, which are obsolete, with the latest SCADA and HMI systems



Use of the latest communication protocols for future ready systems



Replacing special purpose OEM drives which can't be serviced easily with industry standard drives



Replacing old DC/ low efficiency motors with the latest high efficiency motors and drives

# Automation and upgradation of a wide range of textile machines (of different makes)



## Fabric forming

- Direct warping machines
- Ball warping machines
- Sectional warping machines
- Draw warpers in polyester plants
- Sizing machines



## Processing

The complete range of processing machines:

- Singeing machines
- Continuous bleaching range
- Continuous mercerising range
- Continuous pad steam range
- Continuous washing range
- Continuous dyeing range
- Jiggers
- Stenters
- Sanforisers
- Surface finishing machines

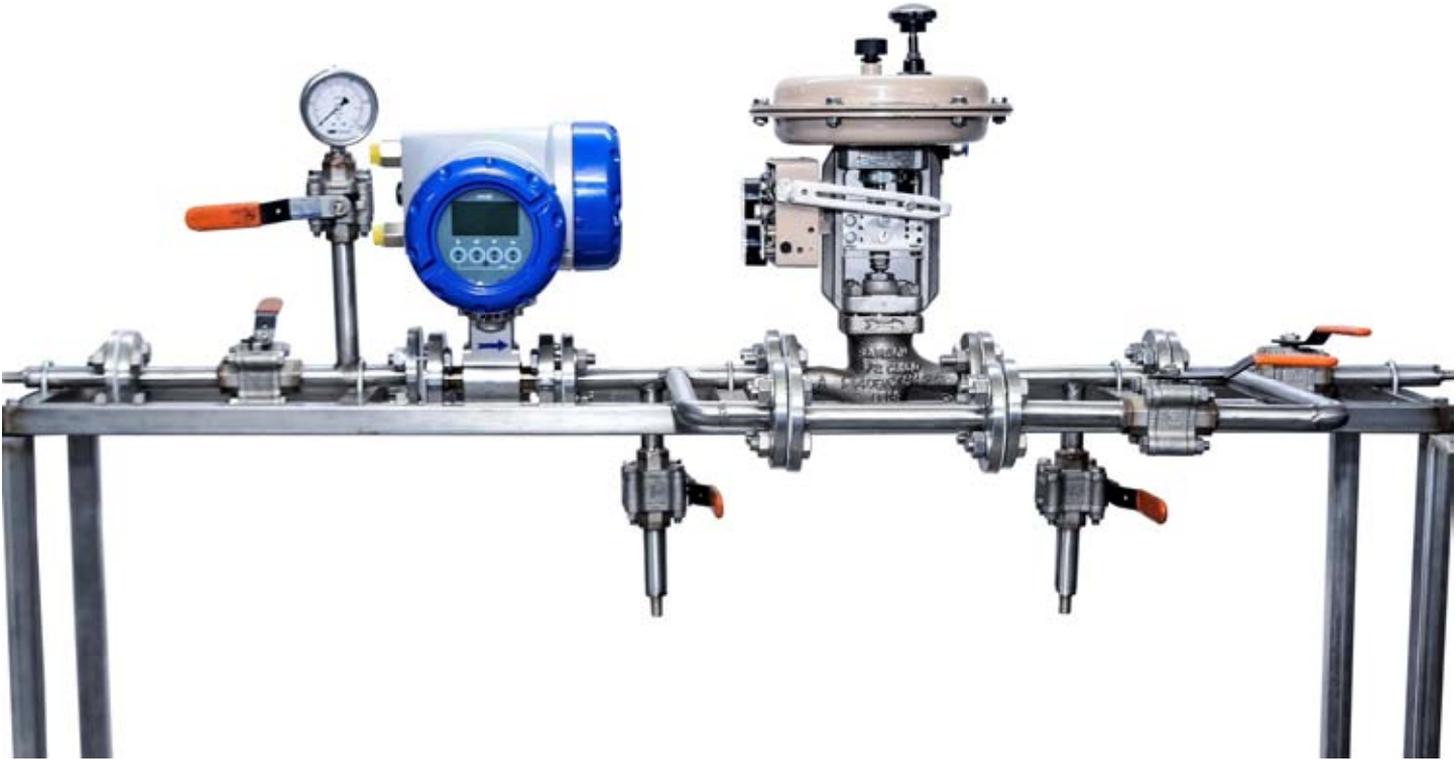


## Synthetic

- POY/FDY winders
- Fibre lines
- Bale and conveyor systems
- Chip conveying systems
- Chip drier systems
- Extruders
- BCF lines



## Indigo dosing



Usually used in denim yarn dyeing, the A.T.E. liquid indigo dosing system has precise flow control, ensuring accurate dosing of chemicals. The system includes both portable feeding units without speed control, as well as bulk feeding units which include speed control.

### Features

- Ideal for denim yarn dyeing (slasher and rope)
- Includes instruments like level transmitter, flow-meter, pressure transmitter, and control valves, which make the system easy to calibrate
- Includes portable/bulk feeding system, control panel, dosing assembly, nitrogen skids, and circulation and AODD pumps
- Includes powder feeder for hydrosulphites, as an option

### Benefits

- Accurate dosing of indigo, resulting in consistent shades over thousands of meters produced
- Exact indigo consumption available on display

# Benefits



Minimum investment



Immediate ROI



Enhances machine productivity and product quality



Online monitoring of utility consumption, quality and production parameters



Reduces operational cost and machine downtime



Reduced consumption of energy and other utilities



Low maintenance, easily available spares



Online monitoring of machine data ready for IoT/Industry 4.0



Interactive visual software such as SCADA



Visual process control using computers or HMIs



Parameterisation for meeting production requirements



Shift batch and quality reporting with SCADA systems



User friendly operating system with various applications



Complete customisation as per customer's needs

## Automation/upgrade engagement process

Feasibility study

Identity obsolete parts (automation and mechanical)

Discussion/brainstorming with customers to identify their specific needs

Where machines are of A.T.E.'s principals, we will coordinate with the principals, where required, to leverage their expertise. A.T.E. also will assist customers in sourcing the original components from A.T.E.'s principals.

Preparing bill of materials

Shutdown planning

Final project execution

Fine tuning



A.T.E.'s team of experts for undertaking machine automation and upgradation have a wide ranging experience of having successfully executed several such projects encompassing various makes and models of textile machines from different textile segments. With meticulous planning and preparation, the team ensures the execution of the machine automation and upgradation projects with maximum efficiency and with minimum disruption in the production programme of mills.



**Marketed by:**

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