Luwa

Part of the Nederman Group

Digital Solutions

Textile Air Engineering

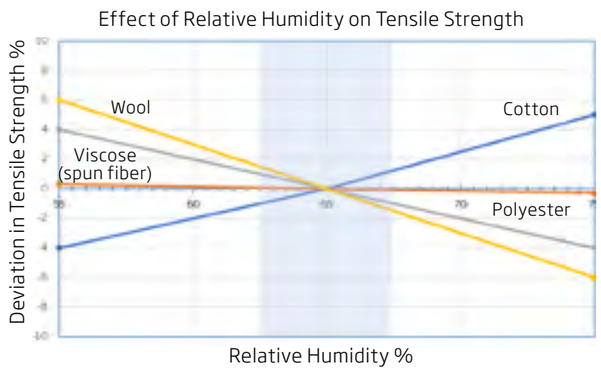
luwa.com

Take control of your Textile Air System

Control, Analyze & Report

In textile manufacturing processes, many factors influence the productivity and quality of the yarn and fabric. The main task of air conditioning and filtration systems is to keep these factors under control to achieve the highest utilization from the installed machinery.

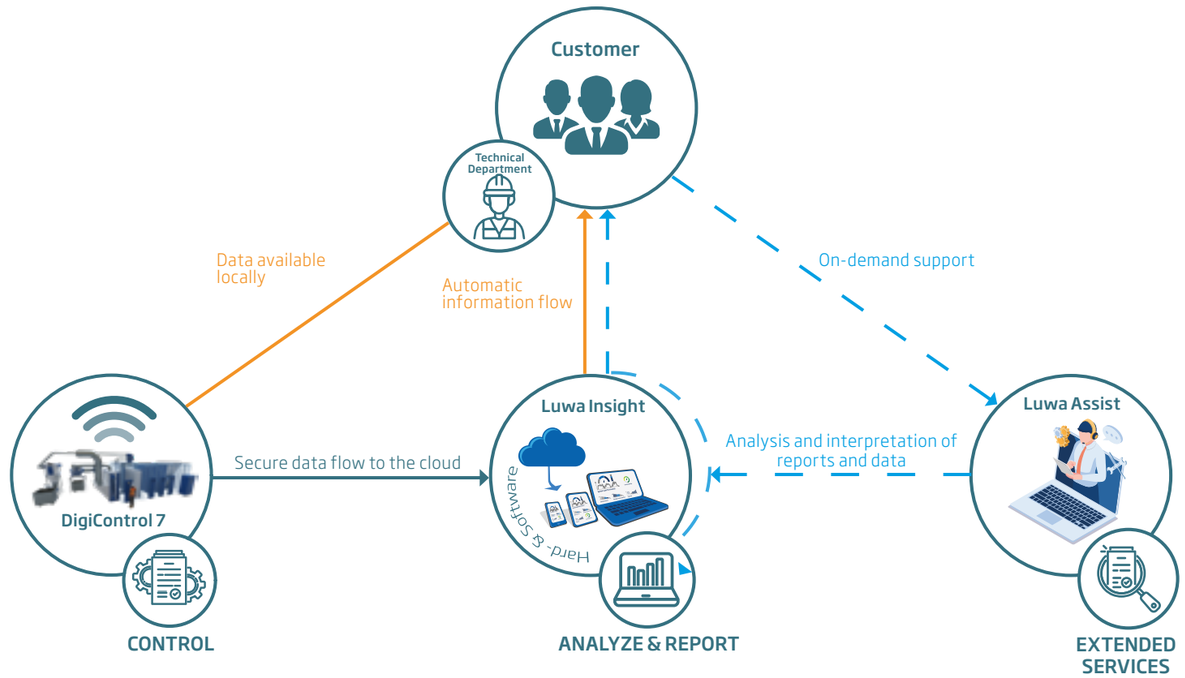
- Constant relative humidity, within a range of ± 2.5 % RH
- Stable temperature profile (mechanical cooling only)
- Air balance in production areas



Luwa´s digital solutions create value from data by providing key indicators on the textile mill´s performance at a glance. The system can connect the textile air components in the textile mill. Customized to the customer's requirements, Luwa´s digital solutions display user-specific information so that owners, managers and operators can control, monitor and maintain the textile air equipment in the textile mill. Responding to challenges without delay and minimizing expensive downtime require the right information to the right people at the right time. With near real-time data streams of the textile air equipment in the textile mill, Luwa´s digital solutions provide key performance indicators.

Digital Solutions – Data & Information Flow

Luwa´s digital solutions enable the gradual digitalization of the textile air system while meeting the highest data security standards. Luwa´s digital solutions consist of three modules: Luwa CONTROL (DigiControl 7), Luwa ANALYZE & REPORT (Nederman Insight) and Luwa EXTENDED SERVICES (Luwa Assist).
With Luwa´s digital solutions, each user, from mill owner to operator, receives an overview of the relevant information needed and can manage the textile air system either locally or remote.



Luwa DigiControl 7 – CONTROL

Ideal regulation of the textile production space is achieved by a harmonized interaction of textile air equipment, digital control and a precise basic sensor package. The right information delivered to the right people in the right way is the capstone of Luwa´s digital solutions package CONTROL.
DigiControl 7 delivers this harmony, unlike random assemblies of hardware and software.
All Luwa switchboards are custom designed for the task in our own factories. Service technicians can control and monitor textile air systems locally via the PLC and high-resolution HMI screens, which are available in three sizes, making status indication fast and easy for any operator.

Benefits

- Access from any browser in the same network for 5 users
- Easy software install and reboot
- Reliable industrial PLC
- Multi-PLC view
- Trends with up to 6-months history
- Alarm Manager including 6-months history
- Safety level SIL1
- Serial communication to VFD (for start, stop, reset, speed setpoint)
- Secure industrial standard modem and data
- Analog output control in 0-10V or 2-10V DC
- Motors without VFD with manual/automatic control over relays
- Key switch for automatic start, start with LED/stop buttons, reset button with LED
- Control panel with fan cooling
- Operating hour counter

Insight – ANALYZE & REPORT

Control Center

Take control of your textile air systems performance by monitoring key parameters based on data from sensors installed in your Luwa equipment. The dashboards are available on any web-enabled device and the Insight mobile app.
Fully customizable so that it can be tailored to your specific needs using an intuitive drag-and-drop user interface. The standard control center comes with pre-built dashboards developed to provide you with the most important insights into your textile air equipment data.

Historical data is available at your fingertips so that technicians can quickly navigate through the data to identify potential issues. Find changes over time and identify trends. Set thresholds on the data to make the health and performance of your system visible at-a-glance.

Benefits

- Receive real-time information of system performance
- Detect and analyze deviations on trends
- Quickly dive into historical data with rapid responsiveness and ease-of-use
- Reduce expensive downtime through preventive measures
- Create different dashboards for different roles
- Intuitive drag-and-drop interface

Alarm Center

Insight alerts the user so that quick action can be taken to reduce extended downtime and keep the conditions stable.

The Insight alarm center provides 24/7 visibility of all alarms in one place, which can be visible on both PC and mobile devices. It's possible to receive e-mails, SMS, or push notifications when particular alarms are raised, so you can stay informed no matter where you are.

Benefits

- Continually evaluate conditions and create specific alarms
- Focus on important alerts through levels of severity
- Tailored notifications sent to the right user
- Active and historical alarms for trend analysis
- Alarm supression and shelving for flexible management
- Early problem detection for optimized uptime

Insight Reports

Take advantage of the built in service that enables you to extract more sophisticated reports. Gain insights into areas such as system performance.

Use the quick ranges between the last 5 minutes and 5 years to create the report or create a custom range to find the correct data. Receive the report in a pdf paper format. Easy to read and store.

Example of report types:

- Humidity & Temperature report
- Weekly/monthly filter media check

Generate the report on-demand or set up a schedule for subscriptions. Create a distribution list for your report to manage different target groups. Pick the CSV (Comma-separated-values data format) option for importing the data into other tools or systems.

Benefits

- Receive recurring reports via e-mail regarding your textile air equipment health and performance
- Get the standard report with the installation of the system
- Easily create your own report using the intuitive drag-and-drop user interface

Insight Analytics

Insight Analytics provides valuable information and predictions about your system.
Sensors for temperature, humidity and filter differential pressure are analyzed in real time by algorithms designed by Luwa experts to provide valuable insights. The insights are available in the cloud, mobile-app or delivered as a scheduled e-mail.

Example of insights are:

- Prediction of maintenance and service based on the actual filter condition by analyzing differential pressure development
- Trends and changes over time
- Relation between sensor data and different thresholds

Insight Analytics displays the findings in an user friendly format, including the possible reason behind the result and suggested actions.

Note: The following content contains predictions based on available information and historical trends, which may differ from actual outcomes. The prediction is only an advice and do not replace the customer responsibility to perform maintenance and visual check according to product and system guidelines.

Benefits

- Improved life-cycle management with early fault detection
- Increased uptime by analysis of trends and predictions – the predictions will provide actionable insights to prevent unplanned downtime
- Planned service actions based on insight predictions

Insight Cloud Security

Insight is built on the most advanced and secured technologies available for Industrial Internet of Things (IoT).
Insight uses the best technologies from AWS (Amazon Web Service) and Microsoft Azure Active Directory.
The information is separated in data and its real-world description (meta- data) to ensure anonymization.
All connection between the gateway in the factory and Insight cloud is always initiated by the gateway.
All inbound connection attempts are rejected.
Wired LAN or WIFI comes as a standard option.
It has a Fully encrypted communication with the cloud service. In case of interruption there is a built in fallback solution to hardwired network.
Data over cellular can also be used if that is preferable.
In case of network interruption, the gateway will buffer data and transmit it again once the connection is reestablished.
Continuous 3rd party security and penetration testing assure highest security standards.

Features

- The application is GDPR compliant
- IEC 62443-4-2 certified
- Customers are fully in control whether VPN from outside is enabled
- All communication is fully encrypted
- High data availability
- Insight uses Microsoft Azure Active Directory for user authentication

Luwa Assist – Extended Services

Would you like additional support from our Textile Air Systems experts to analyze your data and give you recommendations?

Contact us via email and we will look into your data to assist you remotely. In the event of a problem, upon request, a data analysis and evaluation can be performed remotely by a Luwa expert to determine actions that should be taken. Additional support for the Insight platform will be available to you.

Ultimate peace of mind –
Connected plant

Together we can make progress towards a digitally monitored, controlled and cost-effective Textile Air Engineering plant. We are dedicated to improve efficiency and help reduce the environmental impact of industrial textile production.

Examples of possible Textile Air System monitoring & control

Humidity & temperature monitoring & control

Filter media monitoring & control

Energy consumption monitoring & control

SCAN ME
to learn more about
our digital solutions

Disclaimer:
The brochure has been compiled to the best of our knowledge and in good faith with the utmost care. However, it may be subject to type errors or technical changes for which we assume no liability. The photos and illustrations are purely informative in nature and in part show special equipment options which do not feature in the standard scope of delivery. Depending on the specific design and configuration of the system, the scope of delivery may change.
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Luwa Air Engineering, founded in Switzerland in 1935, is a global market leader in textile air engineering and a quality and performance leader with a global brand in the fibre and textile industry. Luwa has been part of the Nederman Group since 2018. The Luwa Group's activities include the design and engineering of single components and whole systems as well as manufacturing, assembly, installation and after sales services. With subsidiaries in China, India, Singapore, US and Turkey, the group has a significant global installed base that is the source of Luwa's deep understanding of the technical demands as well as the local requirements of customers.

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