

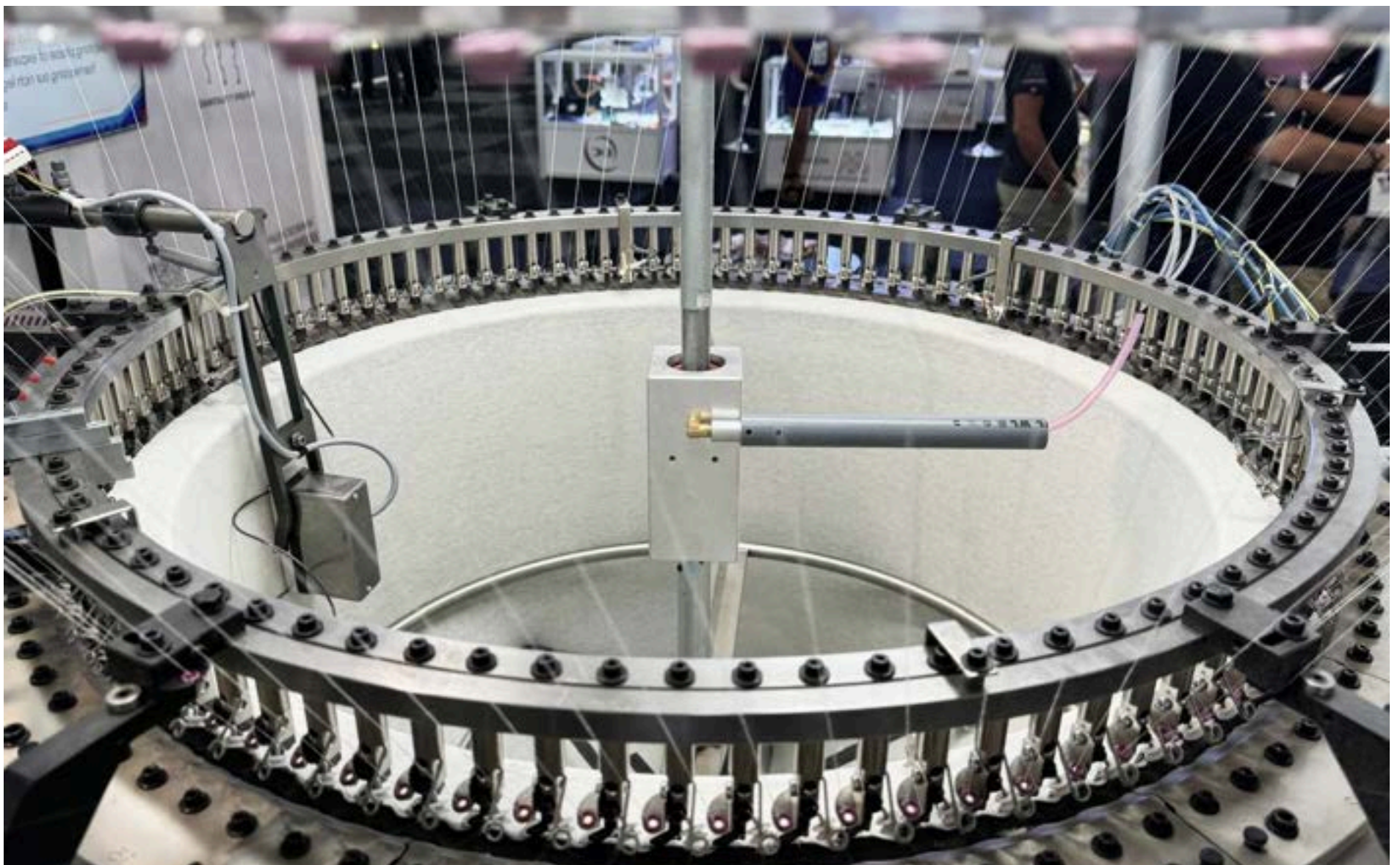


Pioneers in Knit Fabric Scanning & Knit Monitoring

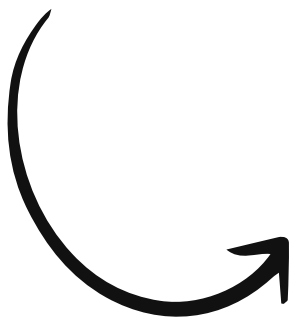
Connect:

+1 (732) 469 5551

sales@matrixcontrols.net



Struggling With These Obstacles?



- ▶ Are you facing frequent quality control issues?
- ▶ Do you struggle with inefficient yarn usage?
- ▶ Are you experiencing inconsistent knitting operations?
- ▶ Is your manufacturing process hindered by a lack of real-time data and analytics?
- ▶ Are you struggling with production traceability?

Let's Solve These Together with Matrix Controls' Innovative Solutions

95%

Detect and reduce defects upto

25%

Boost efficiency by upto

65%

Reduce wastage by upto

Transform Your Knitting Process With Our Comprehensive Solutions



Knit Scanner

Advanced Defect Detection And Pattern Analysis.

Yarn Rate Measurement System

Real-Time Yarn Monitoring And Accurate Measurement.

Knit Plus 4000

High-Performance Control Box With User-Friendly Interface.

MKMMS Software

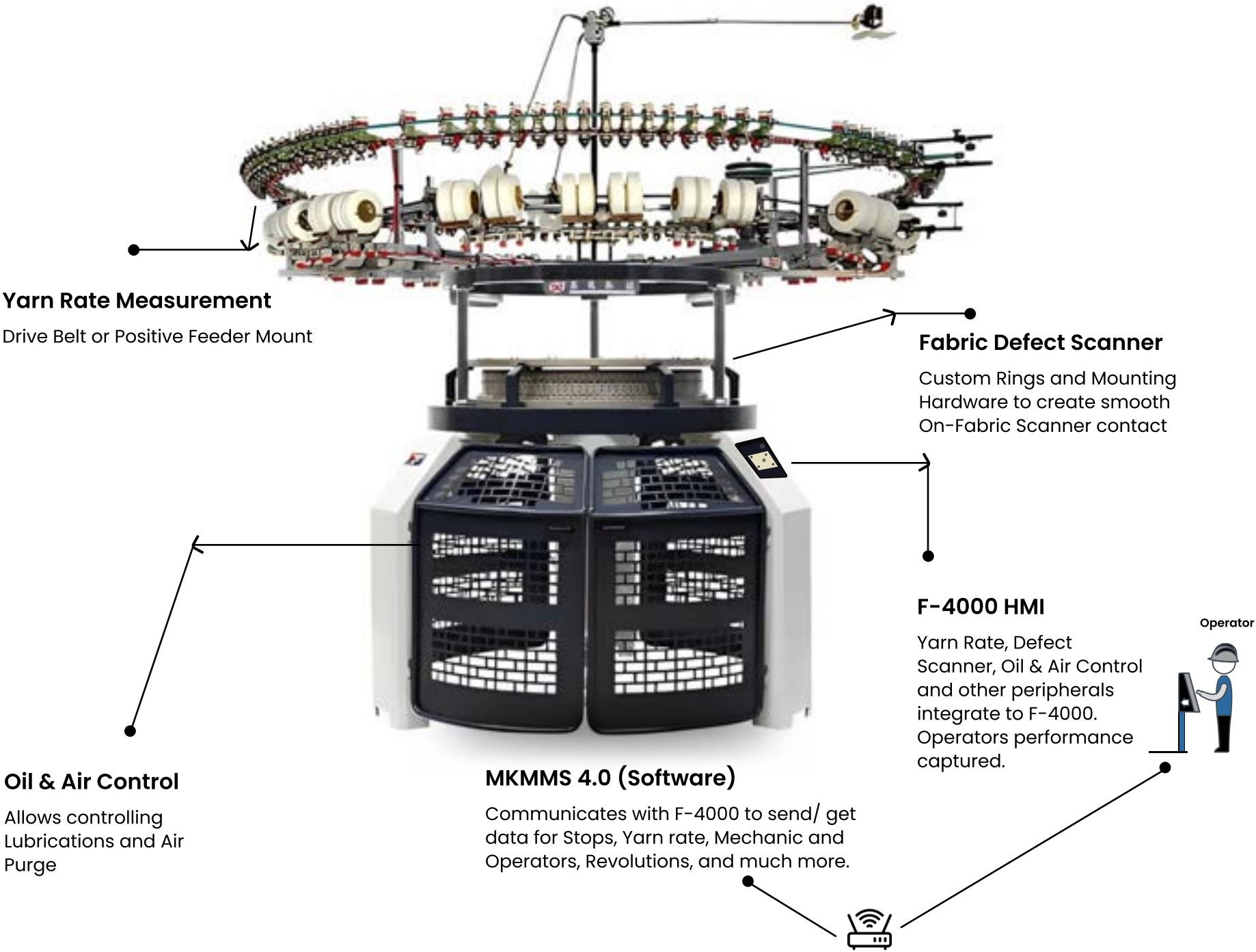
Real-Time Data Analytics And Seamless Integration Capabilities.

Key Clients And Brands

60 years of meeting customer expectations



How It Works



ROI- Driven Solutions



Opportunity 1: Reduce Fabric Defects By Up To 95%

- ▶ **Streamlined Production:** Real-time alerts reduce rework and improve workflow.
- ▶ **Reduced Waste:** Save up to 65% of material typically lost to defects.
- ▶ **Labor Efficiency:** Automation reduces manual inspection by 75%, reallocating manpower to higher-value tasks.

Opportunity 2: Boost Efficiency By 25% With Downtime Reduction

- ▶ **Enhanced Monitoring:** Track stops, yarn lots, and operator inputs to minimize idle time.
- ▶ **Smart Decisions:** Analytics uncover bottlenecks for continuous improvement.
- ▶ **Minimized Downtime:** Swift alerts enable prompt issue resolution, maximizing machine use.

Opportunity 3: Increase Machine Speeds By Up To 10%

- ▶ **Optimized Speed Management:** Achieve higher production output without compromising quality.
- ▶ **Real-Time Insights:** Ensure seamless operation, even at faster rates.
- ▶ **Quality Gains:** Defective output drops by 75%, delivering superior products.

Opportunity 4: Cut Costs With Yarn Feed Rate Optimization

- ▶ **Real-Time Precision:** Align yarn usage with exact fabric specifications.
- ▶ **Sustainability Gains:** Reduce waste and achieve sustainability goals.
- ▶ **Financial Impact:** Eliminate unnecessary expenses and boost profitability.

Opportunity 5: Improve Yarn Quality And Reduce Downtime

- ▶ **Traceability:** Trace every yarn lot through production and allocate resources strategically.
- ▶ **Proactive Issue Resolution:** Identify and resolve yarn batch issues swiftly, reducing machine stops.
- ▶ **Enhanced Yarn Quality:** Improve consistency, cutting defects by 75%.
- ▶ **Customer Satisfaction:** Deliver premium, defect-free products to foster trust and loyalty.

Yarn Rate Measurement

The Yarn Rate Measurement System is thus quite significant in optimizing knitting operations, yarn being one of the most expensive input factors to produce knit fabric.

This component establishes accurate real-time measurements for yarn usage. It integrates seamlessly with the Knit Plus 4000 and MKMMS Software to provide a comprehensive knit monitoring solution.



Why is there a need for Yarn Rate Measurement?

Consistency of Weight

Maintains the correct fabric weight, ensuring uniformity and adherence to standards.

Waste Management

Minimizes excess yarn, reducing waste and environmental impact.

Quality Control in Dyeing Process

Prevents color mismatches and maintains fabric specifications.

Customer Satisfaction

Ensures consistent product quality, preventing returns and protecting brand reputation.



Human Machine Interface (Knit Plus – 4000)

The Knit Plus 4000 is Matrix Controls' state-of-the-art control box designed for the textile industry.

Our HMI serves as a bridge between the operator and the knitting machine. **Paired with MKMMS Software, our system allows control, monitoring, and management of knitting machines.**

Efficiency Optimization

- ▶ Consolidates data from various monitoring components.
- ▶ Sends information to MKMMS via Wi-Fi or Ethernet.
- ▶ Enables real time alerts and data-driven analysis.
- ▶ HMI integrates with proprietary yarn rate transducer.
- ▶ Monitors yarn rate for consistent quality and waste reduction.

Fabric Defect Scanner



Maintaining Superior Quality

▶ The Fabric Defect Scanner is an advanced solution for the textile industry.



Reducing Costs

▶ Specifically designed to analyze knit patterns and detect defects with exceptional precision.

▶ Ensures each product meets the highest quality standards.



Minimizing Fabric Wastage

▶ Eliminates the need for manual inspection.

▶ Significantly reduces defects.



DID YOU KNOW!

McDonald’s used the Matrix Margin Meter to calculate sales and revenue

Evaluating the Impact of a Fabric Defect Scanner

With Scanner

- ▶ Early defect detection ensures only high-quality fabric.
- ▶ Consistent quality aids efficient downstream processing.
- ▶ Maintains production schedules and delivery deadlines.
- ▶ Optimizes energy use, reducing costs and environmental impact.
- ▶ With the scanner, one operator can oversee 4 to 8 machines.

Without Scanner

- ▶ Undetected defects allow defective fabric to proceed downstream.
- ▶ Inconsistent quality halts production and requires rechecks.
- ▶ Bottlenecks and delays affect delivery schedules.
- ▶ Reprocessing increases energy use, costs, and environmental impact.
- ▶ Each machine requires an operator for visual inspections.

MKMMS 4.0:

Revolutionizing Textile Monitoring

The MKMMS (Matrix Knitting Manufacturing Management System) Software is a comprehensive software designed to integrate and optimize all aspects of the manufacturing process. It provides real-time data insights and advanced analytics to improve operational efficiency.

MKMMS 4.0 collects data from Knit Plus 4000 systems installed on all knitting machines. The data is centralized to provide you with reports relating to operator stops, machine stops, job/style production, efficiency, production information and much more.



Data-Driven Insights

Centralizes real-time machine data, providing actionable insights to optimize operations and improve efficiency.



Web Browser Management

Facilitates two-way communication, allowing users to set specifications and customize the system according to their requirements.



Comprehensive Evaluation

Assesses machine and operator performance to enhance process quality and the finished product.



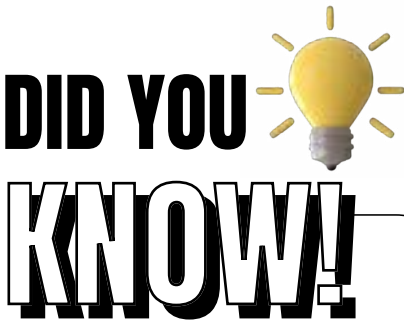
Maintenance Management

The system's user-friendly interface allows for easy scheduling and tracking of maintenance tasks, ensuring that all machines run smoothly.



Complete Traceability

Gain full visibility across every stage of knitting process, ensuring accountability and quality assurance.



Many of our customers rely on matrix to calculate efficiency based pay for operators



About Us

Matrix Controls has been a leader in the knit monitoring industry since the 1970s. We specialize in innovative monitoring and scanning solutions for knitting machines, ensuring high quality and traceability.

Initially focused on developing solutions for Textile Manufacturers, our customer base has expanded into many other batch manufacturing industries. Industries covered include Textile and Apparel, Food, Beverage, Nutraceutical, Supplement, Chemical and Cosmetic industries.



Head Office

+1 (732) 469 5551
sales@matrixcontrols.net
330 Elizabeth Ave,
New Jersey, 08873, USA

South America Office

+1 (732) 372-3759
sales@matrixcontrols.net
21101 San Pedro Sula, Cortés,
Honduras

Asia Pacific Office

+92 (301) 848 5046
zeeshanali@matrixcontrols.net
22, Civic Center, Minhaj University Road,
Township Commercial Area Lahore, Pakistan