g-loader Adv Power Up Productivity with G-Loader.

Looking for an efficient solution to simplify fabric roll loading while reducing time, cost, and manual effort?
The G-LOADER ADV is engineered for modern production environments, delivering fast, and fully automated fabric handling.

Built with a robust structure and ergonomic design, it enhances workflow efficiency while ensuring operator comfort. The multi-roll loading system optimizes material handling, minimizes fabric damage, reduces labor dependency, and significantly improves productivity

Working Principle

Step 1 – Roll Placement & Detection
Fabric rolls are positioned on the roll stand. Sensors verify roll availability and alignment.

Step 2 – Roll Sequence Selection
The operator selects the required roll sequence through the touchscreen HMI. The system activates the programmed position.

Step 3 – Automatic Roll Pick-Up
The automated clamp mechanism securely grips and lifts the selected fabric roll from the roll stand.

Step 4 – Controlled Transfer & Alignment
Using encoder-based positioning and servo-controlled linear motion, the roll is accurately aligned and transferred toward the Spreader / G-RELAX / Cutting machine.

Step 5 – Precise Placement & Cycle Reset
The roll is smoothly placed into the machine loading position. After completion, the loader returns to its home position, ready for the next programmed sequence.

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Operational Performance Impact
Without vs With G-Loader Adv

INDUSTRIAL PROBLEM	G-LOADER SOLUTION
Manual fabric loading requires high manpower and time	Fully automated Multiroll loading reduces labour dependency and saves time
Heavy roll handling creates worker safety risks	Ergonomic design ensures safe, controlled, and strain-free operation
Fabric misalignment during loading affects cutting accuracy	Guided loading system ensures accurate roll positioning
Fabric damage due to improper manual handling	Smooth and controlled transfer minimizes material stress and damage
Production downtime during roll changeover	Fast loading mechanism reduces setup time and improves workflow continuity
High operational and energy costs	Energy-efficient system lowers long-term operating expenses
	

WHY CHOOSE G-LOADER ADV

Operational Area	Performance Benefit	Result
Roll Handling	Automated lifting from roll stand	No manual strain or heavy lifting
Inline Integration	Direct loading into Spreading / Relax / Cutting machine	Continuous production flow
Loading Speed	Fast and controlled roll transfer	Reduced downtime between rolls
Positioning Accuracy	Precise centering and placement	Improved fabric spreading quality
Worker Safety	Eliminates unsafe manual handling	Lower injury risk
Manpower Efficiency	Minimal operator requirement	Reduced labour cost
Fabric Protection	Smooth and stable roll movement	Prevents fabric damage
Production Efficiency	Consistent automated cycle	Higher daily output
Operational Control	Simple control system	Easy monitoring and operation
Cost Optimization	Energy-efficient system	Lower overall operating cost

ROBOTIC ARM

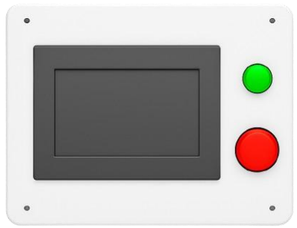
Robotic Arm with Precision Lifting Control

Equipped with a heavy-duty pivot-based robotic arm designed for stable and accurate fabric roll handling. The arm securely grips, lifts, and transfers rolls from the roll stand to the Spreader / G-RELAX / Cutting machine with controlled and balanced movement.

Powered by servo-assisted motion and PLC synchronization, the robotic arm ensures smooth positioning, high load stability, and damage-free roll transfer in continuous production environments.

User-friendly interface with customizable settings

Equipped with an easy-to-operate HMI control panel for quick and simple setting adjustments.
Operators can customize parameters to suit different fabric types and production requirements.



HMI

Safety & Compliance

- Dual emergency stop switches for immediate shutdown.
- Integrated safety sensors for continuous operational monitoring.
- Overload protection system for motors and electrical components.
- Guarded moving parts for enhanced operator safety.
- Designed in compliance with industrial electrical and safety standards.

2 Emergency stop switches

Features

- User-Friendly Touchscreen HMI with Customizable Settings
- PLC-Based Automation Control System
- High-Efficiency Automatic Fabric Loading to Spreader/g-relax/cutter
- High-Capacity Roll Lifting Arm
- Servo-Controlled Precision Positioning
- Precision Linear Motion System
- Adjustable Roll Diameter & Multi-Width Compatibility
- Modular Inline Integration Design
- Heavy-Duty Structural Frame with Stable Anti-Vibration Base
- Real-Time Monitoring System
- Advanced Safety Mechanisms

Technical Specifications for G-Loader Adv

SPECIFICATIONS	G-LOADER ADV 180	G-LOADER ADV 200	G-LOADER ADV 220
Machine Model	# GLA-70-100-00	# GLA-78-100-00	# GLA-86-100-00
Power Supply	230V±10V AC (single phase), 50/60 Hz, 32 Amps	230V±10V AC (single phase), 50/60 Hz, 32 Amps	230V±10V AC (single phase), 50/60 Hz, 32 Amps
Power Consumption	2.5 kW	2.5 kW	2.5 kW
Dimensions (L X W X H in mm)	2650 x 700 x 2450	2850 x 700 x 2450	3050 x 700 x 2450
Weight	480 kg	495 kg	510 kg
Load Capacity	100 kg	100 kg	100 kg
Operating Temperature Range	25°C - 58°C	25°C - 58°C	25°C - 58°C
Noise Level	≤60 dB	≤60 dB	≤60 dB
Control Type	Digital control panel with touch screen interface	Digital control panel with touch screen interface	Digital control panel with touch screen interface
Loading Mechanism	Automated clamp system with precision sensors	Automated clamp system with precision sensors	Automated clamp system with precision sensors