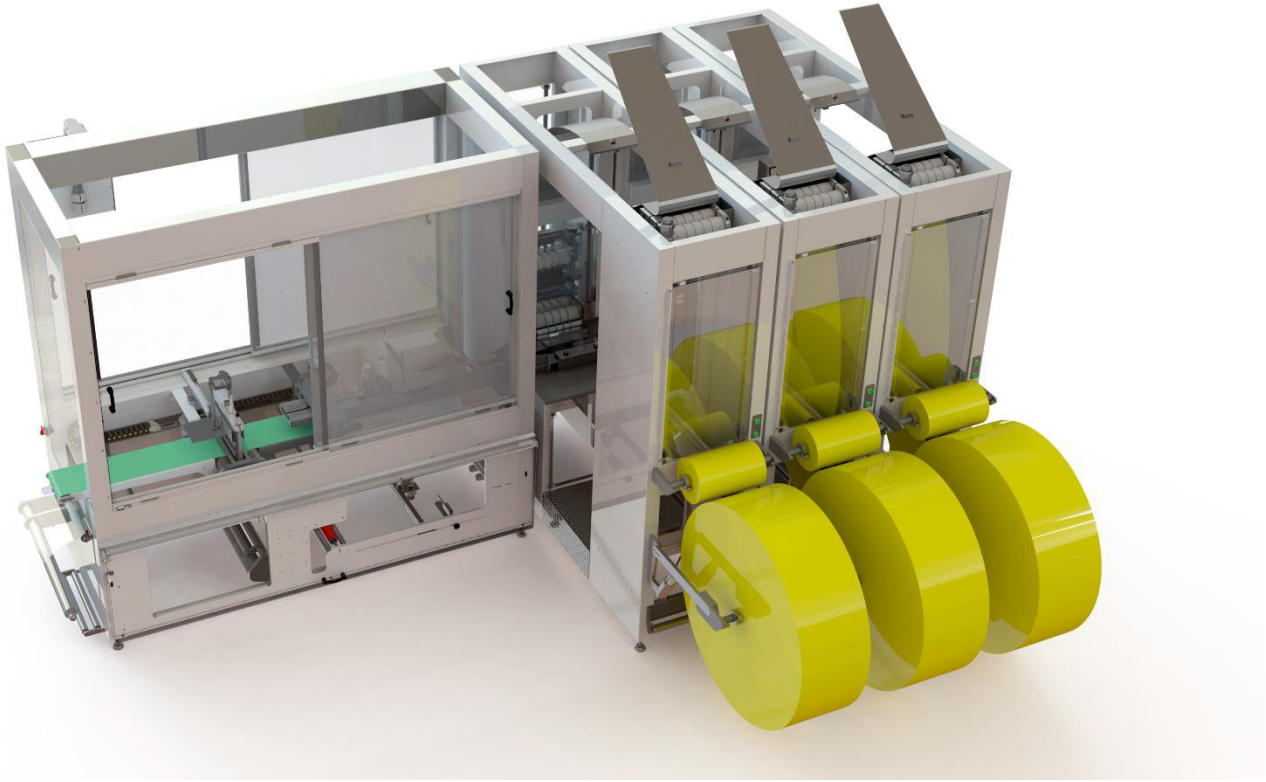
Jofesa Imagine Systems
the art of technology

CLEANING CLOTH LINE



“IRIS 3-M”

www.jofesa.com

C/ Dels Telers 63, Ontinyent (Valencia)

Automatic production line for manufacturing NON-WOVEN cleaning cloths. Fully automated from the fabric roll onward: material feed, lengthwise folding, cutting, crosswise folding, and final stacking. This sequence is replicated across three multi-color units, then packaged in BOPP (Biaxially Oriented Polypropylene) film. High-output production of premium-quality cloths. This line can deliver the same throughput as 10–15 people across all areas.

TECHNICAL SPECIFICATIONS

• STRUCTURE

Welded steel frame. At present, all Jofesa machines are built with an electro-galvanized, lacquered finish and oven-cured.

• LIGHTING

Lighting with 5050 LED strip lights, featuring RGB color changes (green, blue, and red) across the entire machine to enhance operator-to-machine communication. Energy savings and environmental protection.

• CONTROL

New OMRON SYSMAC automation platform. Today, every Jofesa machine—from the smallest to the largest—comes equipped with this same controller, delivering the speed, flexibility, and scalability demanded by modern industry.

This allows us to keep expanding our machines without having to change the installation. Built on the latest INTEL CPUs, the controller brings motion, logic, safety, and vision together—everything programmed in a single software environment, with 128-axis / 250 µs cycles.

Our machines feature two communication buses:

- **EtherCAT (CAN over Ethernet):** the fastest machine network on the market, letting us connect to every device on the machine without complicated hardwired installations.
- **EtherNet/IP:** a highly robust, high-speed industrial Ethernet bus that connects the machine's touch terminals—where everything is controlled, programmed, and all machine settings and parameters are selected—and that can also be tied into our customers' networks to capture all the required information (Industry 4.0).

Each machine module has its own control cabinet, and a single EtherCAT cable links it to the CPU. Servo motors, inputs and outputs, safety, machine vision, and all pneumatics are managed through this bus.

The Sysmac platform also includes the safety solution: both the safety controller (dedicated safety CPU) and the safety I/O can be distributed anywhere on the machine, making installation easier and enabling safety status monitoring on the touchscreens.

• MOTORIZATION

At the core of our machines are Accurax G5 servo systems—the ideal blend of control and mechanics. Motion control is handled primarily by servo motors, and every servo drive includes, in addition to the EtherCAT bus, a safety input compliant with ISO 13849-1 Performance Level D.

They're controlled by a Motion Control CPU, which lets us perform interpolations, create cam tables, or electronically link axes together—making even the toughest tasks straightforward.

Also, wherever a servomotor isn't required and a standard motor will do, it's always driven by MX2 series inverters with torque control.

open-loop control, allowing us to manage them starting at 0 speed, with safety inputs that cut power to the motors whenever the safety guards are open.

• DETECTION AND VISION

Leuze detection system. Our color or contrast sensors are also integrated into Sysmac and connected via the machine EtherCAT bus, allowing us to program, configure, and view any photoelectric sensor from the touch terminals—while delivering ultra-fast response speeds.

• PNEUMATICS

Pneumatic motion control is also fully integrated, built around FESTO-MPAL terminals that are completely configurable and scalable, and connected via the machine EtherCAT bus. All solenoid valves can be manually actuated from the machine's touchscreens, and the actuation times can be adjusted as well.

Approximately 90% of the pneumatic actuators are custom-built specifically for the required operations, using a patented pneumatic system (COMPAC SYSTEMS) that optimizes space and system application, making changeovers and maintenance easier through a dedicated quick-change system.

• SOFTWARE MAINTENANCE

All of this runs on a single software platform that controls everything—and that we can access online to monitor the system, update the program, or carry out maintenance tasks.

• MANUALS AND REGULATIONS

CE manuals and compliance documentation are provided, along with a USB that includes a complete 3D model of all machine components. This makes maintenance and modifications easier by letting you view parts without having to disassemble the machine.

PROCESSES

- Automatic fabric feed.
- Pre-aligners. 4
- Primary fabric folding with electronic adjustment.
- Secondary fabric folding with electronic adjustment.
- Fabric compensation.
- Cut programming by size.
- Pneumatic blade cutting.
- Folded wipe removal.
- Wipe stacking.
- Transfer of the cutting modules to the bagging unit.
- Film wrapping for wipes.

PRODUCTION AND CONSUMPTION

- Estimated output for 400 x 360 mm wipes – 1100 packs/hr 9900 wipes/hr.
- Maximum fabric infeed: 500 x 500 mm (250 x 250 mm).
- Minimum fabric infeed: 300 x 300 mm (150 x 150 mm).
- Voltage 220/380 VAC 50Hz.
- Pneumatic consumption – 850 L/minute +/- 10%

PLANS AND DIMENSIONS