Jofesa Imagine Systems
the art of technology

CURTAIN LINES AND BLINDS

"SHOWER CURTAIN TRAIN AURIGA 2300"

www.jofesa.com

C/ Dels Telers 63, Ontinyent (Valencia)

During the course of more than 30 years in the manufacture of machinery, our premise has always been the quality of our products. We know that perfection does not exist, but we are sure that we strive for it with perseverance and determination.

In the last decade, our evolution has taken us to the technological top at international level, being to date, the first company to manufacture production lines in all the sectors in which we are represented.

Thank you for trusting in our perseverance

CEO - José Ferrando García

DESCRIPTION

Machine for the manufacture of shower curtains in their entirety. Starting from a roll that configures the height of the curtain, the longitudinal selvedges of 24 m/m. are made on the right side by inserting the counterweight and leaving the empty spaces in which the cut and the transversal selvedges will be made.

On the left side, the 45 m/m. selvedge is made and ironed in which the eyelets will be inserted according to the programmed measurements.

The cut is made by detecting and centring the cut between the two eyelets in the cutting area.

Once the garment is cut, it moves to the side seams area where the seams are hemmed with hems of 12 to 50 m/m. on both sides, and the labelling of the garment, starting towards the programmed folding, which, once folded, are stacked on a belt between 1 to 10 units per pile.

TECHNICAL CHARACTERISTICS

- STRUCTURE

  Formed steel structure. Currently all Jofesa machines are manufactured with structure finished in electrogalvanised and fire-lacquered paint.

- LIGHTING

  Lighting with 5050 LED strip lights, with RGB colour change (green, blue and red) throughout the machine, which increases communication between the operator and the machine. Energy saving and environmental protection.

- CONTROL

  New OMRON SYSMAC automation platform. Currently all Jofesa machines are installed with this new platform from the smallest to the largest machines with the same controller, which provides the speed, flexibility and scalability necessary for today's industry.

  This allows us to expand our machines without the need to change the installation. The controller, based on the new INTEL CPUs, integrates drive, logic, safety and vision all programmed from the same software with 128 axis / 250 µs cycles.

Our machines have two communication buses:

- Ethercat (Can based on Ethernet): the fastest machine network on the market, with which we connect to all machine devices without the need for complicated wired installations.

- Ethernet-Ip: a very robust and fast industrial Ethernet bus to which the machine's touch terminals are connected, from which all the machine's settings and parameters are controlled and selected, and which we can connect to our customers' network to collect all the necessary information (Industry 4.0).

Each module of the machine has its own control panel, which communicates with the CPU via a single ethercat cable. The servomotors, inputs, outputs, safety, machine vision and all the pneumatics are controlled via this bus.

The sysmac platform also integrates the safety solution, both the safety controller (specific safety CPU) and the safety inputs/outputs are freely distributed throughout the machine, simplifying the installation, as well as the monitoring of the safety status on the touch terminals.

- MOTORISATION

The heart of our machines are the Accurax G5 servo systems, the perfect combination of control and mechanics. The control of movements is mainly carried out by servomotors, all the drivers that control the servomotors, in addition to the Ethercat bus, incorporate a safety input in accordance with performance level D of ISO13849-1.

They are controlled by a Motilon Control CPU, allowing us to perform interpolations, Cam tables or electronically connect axes with each other, making the most difficult tasks easy.

In addition, where a servomotor is not necessary and a simple motor is sufficient, this will always be controlled by MX2 series drives, with open-loop torque control, which allows us to control them from speed 0, with safety inputs to disconnect the motors when the safeties are open.

- DETECTION AND VISION

Leuze detection system. Our colour or contrast sensors are also integrated into Sysmac and connected via the Ethercat machine bus, allowing us to program, configure and display any photocell from the touch terminals, as well as providing ultra-fast response speeds.

- PNEUMATICS

  Pneumatic motion control is also integrated, based on the fully configurable and scalable FESTO-MPAL terminals and connected via the Ethercat machine bus. All solenoid valves can be activated manually from the machine's touch terminals and the actuation times can be adjusted.

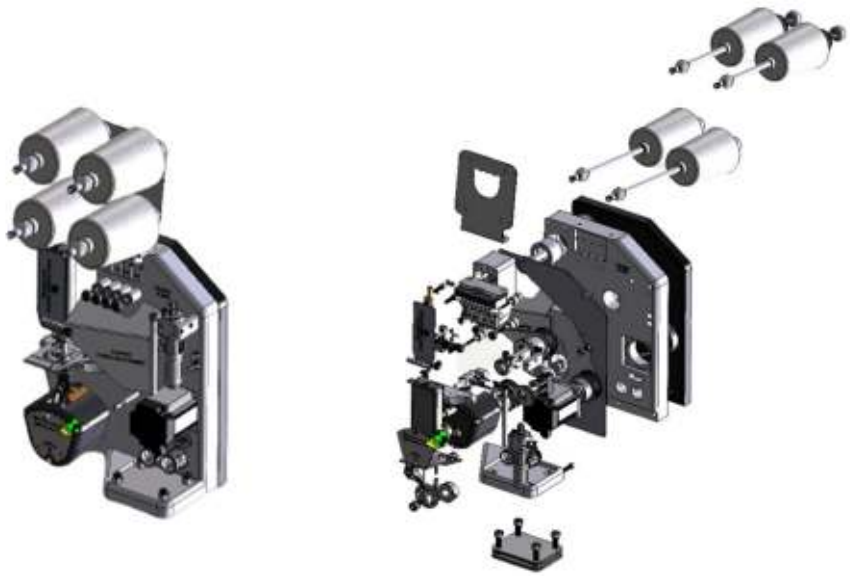
  Approximately 90% of the pneumatic actuators are manufactured exclusively for the required performances, with a patented pneumatic system (COMPAC SYSTEMS) that optimises the space and application of the system, facilitating changeover and maintenance with a proprietary changeover system.

- SOFTWARE MAINTENANCE

  All this with a single software from which everything is controlled and which can be accessed via the internet to monitor changes to the programme or maintenance tasks.

- MANUALS AND REGULATIONS

  Manuals and CE regulations and a CD with all the components of the machine in three dimensions is included, which allows maintenance and changes to be made, visualising the components without having to dismantle the machine.



- CHAIN STICH SEWING GROUPS - UNITS 4

  - Machine developed by Jofesa Imagine Systems, SLU, with all the needs required for automation.
  - Quick connection and head exchange in 3 minutes.
  - Repair of any element in no more than 5 minutes
  - No oil sump (oil mist lubrication)
  - Air cooling of the needle
  - Pneumatic foot lifter
  - Integrated thread detectors.
  - Integrated thread holders.
  - Integrated positioning.
  - OMRON G5 Servo Motor
  - Working speed 4.000 rpm on 2 needles.
  - Working speed 4.500 rpm on 1 needle.

- GROUP OF EYELETS (JOPEVI) - 1 UNIT

  - Non Stop riveting system (inserts the eyelet while the fabric is moving)
  - Hole loader on Torva
  - End of eyelet detector
  - End of eyelet failure detector
  - Automatic oil lubrication
  - Quick connection.

- COUNTERWEIGHT INSERTER

  - Made with Jofesa CHAIN STITCH machine.

- MINI-RI LABELLER

  - Labeller developed by JOFESA IMAGINE SYSTEMS, SLU with the capacity to place 3 rolls of labels.
  - 1-2-3 label folding programming
  - 1-2-3 label cutting programming
  - Cut mark detection
  - Label end detection, etc...

- LONGITUDINAL ALIGNERS D.60

  - Pneumatic aligners designed by JOFESA IMAGINE SYSTEMS, SLU, capable of aligning with a precision of + -1 m/m.
  - Controlled by control and alarm management.

- DRAWING CENTRING SENSOR

  It is responsible for centring the drawing to the counterweight and the eyelets.

- COLOUR DETECTORS (Optional 6 units)

  It aligns the cut of the garment to one stripe of the pattern across the width of the fabric.

- FABRIC FEEDER

  This production line is equipped with a roller feeder that pulls the fabric from the roll or jumbo roll, capable of pulling a roll of 500 m/m diameter (for jumbo rolls 1,500 m/m diameter with external stand), depending on the thickness of the fabric.

- E-6 TRANSVERSE EDGERS

  The transverse edger is an important part of the JOFESA IMAGINE SYSTEMS, SLU design system capable of passing the thickness changes that exist between the crossing of the transverse and horizontal edges, leaving a perfect finish. This edger has internal dragging through a servo controlled from the touch screen.

- CUTTING SYSTEM (Ultrasonic, JOFESA 2000W)

  An efficient system developed to generate a clean cut, providing more speed and less maintenance.

- AXIS-2600 FOLDING MACHINE

  This folding machine designed by JOFESA IMAGINE SYSTEMS, SLU to adapt to the end of our production lines is capable of folding the garment in both transverse and longitudinal directions. The operator can program an infinite number of folds in both directions and fully integrated with the system.

- INTERFACE AND TOUCH SCREEN

  Touch screens (unit 3) on which it is controlled:

  - Cutting length
  - m/m stitch
  - Machine speed
  - Eyelet spacing
  - Selvedge width
  - Tucked fabric
  - Primary pleats
  - Secondary pleats
  - Bundle units
  - Piece count
  - Production per hour
  - Counterweight adjustment
  - Consumption level, etc...

- INETRNAL SETTINGS (For keyed maintenance managers)

  Adjustments of sensors, times, speeds, limitations, etc...

- CONFIGURATIONS (Activate and deactivate items such as)...

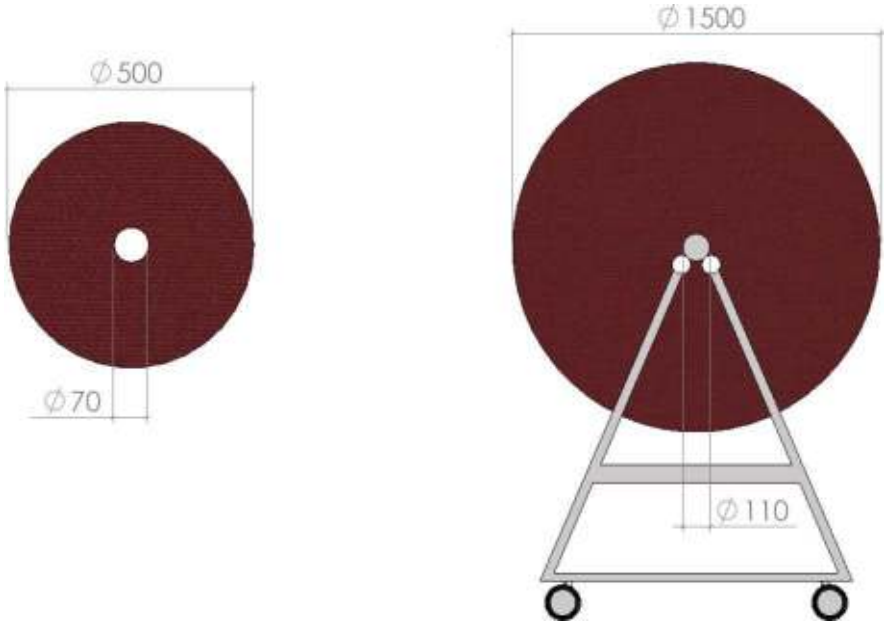
  - Fabric detectors
  - Yarn detectors.
  - Activate and deactivate heads
  - Colour centring devices (if fitted)
  - Aligners, etc...

- MANUAL MOVEMENTS

  - Fabric feed, reverse, raising and lowering of sewing rollers.
  - Labelling, cutting, sharpening
  - Tape feed
  - Folding, etc...

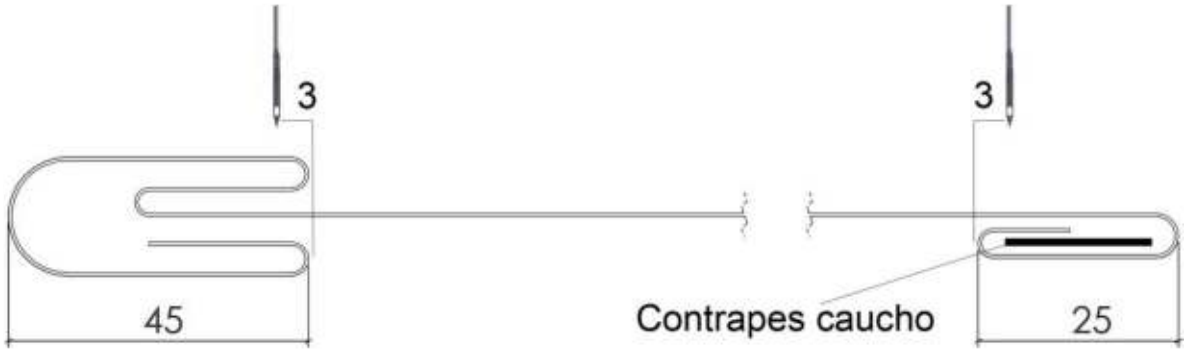
PROCESSES

FABRIC FEEDER FOR 500 m/m diameter ROLLS (for jumbo rolls 1.500 m/m diameter with external stand).



20 to 100 m/m SIDE BREAKERS WITH WASTE STRACTOR (if fitted).

BOTTOM LONGITUDINAL EDGES 24 m/m made with CHAIN- STITCH 1 needle machine (Counterweight).



BORDERING OF UPPER PART AT 45 m/m. made on a 2-needle STITCH machine.

SIDE BORDERING MADE WITH CHAIN STICH MACHINE 1 needle (or optional 2 needles) from 12 m/m. up to-50 m/m.

20M/M COUNTERWEIGHT IN ELASTIC RUBBER, CUTTER AND CURTAIN CENTRING.

CLOSED PATTERN CENTRING SENSOR (CENTRES THE FABRIC PRINT TO THE EYELETS AND COUNTERWEIGHT)

COLOUR DETECTORS (OPTIONAL 6 units).

ULTRASONIC CUTTING JOFESA BRAND 2000W.

PLASTIC OR METAL EYELETS, REMOTELY PROGRAMMABLE WITH JOPEVI BRAND EYELET MODULE.

LABELLING:

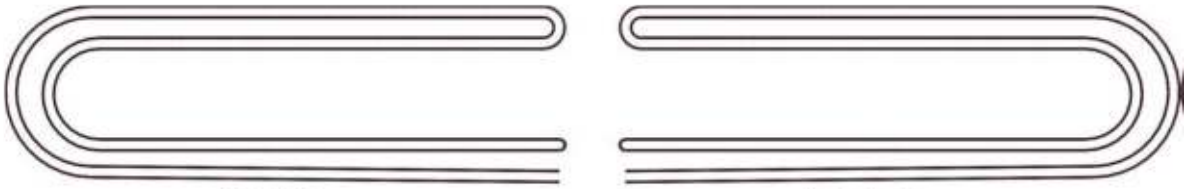
- Roll width from 15 m/m. to 30 m/m.
- Single label length from 50 m/m. to 110 m/m.
- Folded label length from 25 m/m up to 55 m/m.
- Number of label rolls - 3 per labeller.

PROGRAMMABLE LONGITUDINAL FOLDING WITH NUMBER OF FOLDS, DIRECTION AND SIZE.

PLEGADO LONGITUDINAL
UN PLIEGUE

Derecha Izquierda

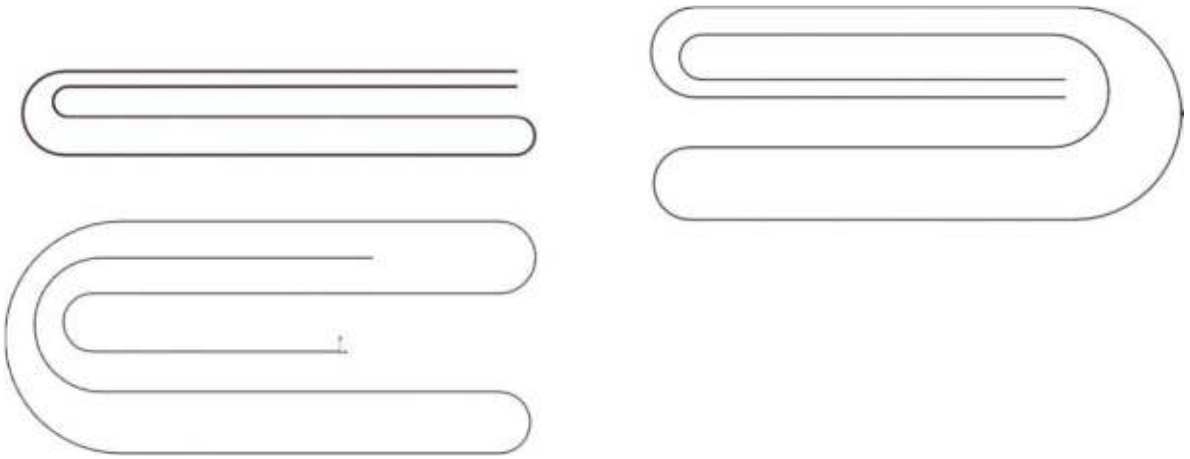
PLEGADO LONGITUDINAL
DOS PLIEGUES



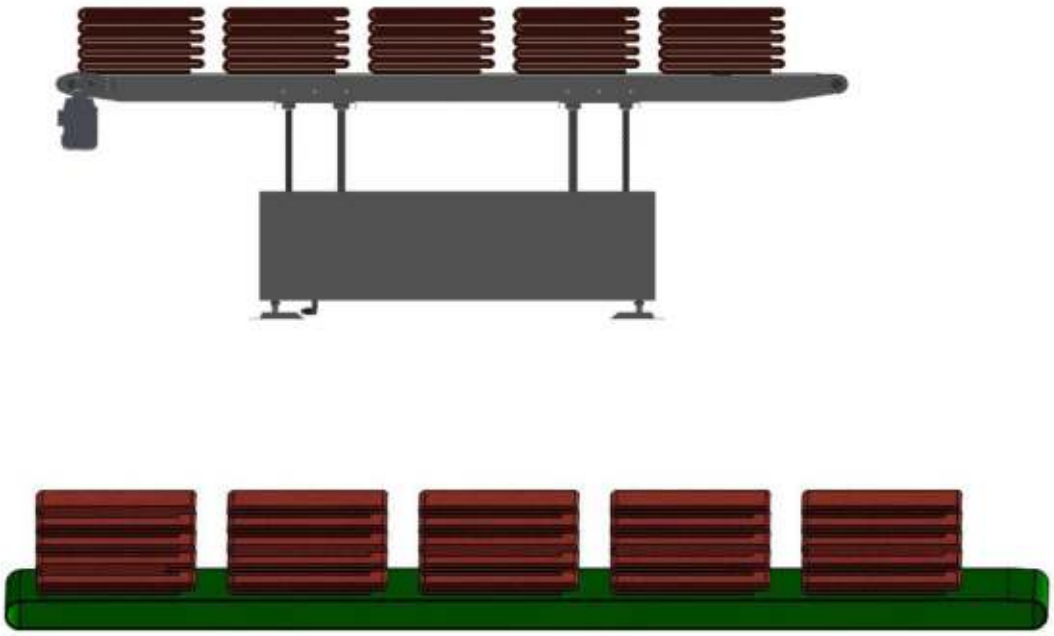
Derecha Izquierda

PLEGADO LONGITUDINAL
TRES PLIEGUES

PROGRAMMABLE CROSS FOLDING WITH NUMBER OF FOLDS, DIRECTION AND SIZE.



STACKING OF GARMENTS, PROGRAMMABLE FOLDING FROM 1 TO 10 UNITS ON A CONVEYOR BELT.



PRODUCTION AND CONSUMPTION

- Output - 350 pcs/h. Priced on a 1.50 x 1.80 garment (3.1 m/m stitch)
- Cutting length - 2000 m/m
- Roll width - 2600 m/m
- Power consumption - 3,5 Kw
- Pneumatic consumption - 362 l/m
- Voltage 220/380 v

PLANS AND DIMENSIONS