

MODEL 920



Very versatile calender specially designed for bonding / laminating / full-coating of a large range of substrates (woven and or knitted textiles, non-woven textiles, foams and other non-textile materials) by using any reactive polymer (in appropriate drums).

The polymer, melted by means of an appropriate fuser, is applied directly to one substrate by means of an engraved cylinder. In case of bonding process the second substrate can be added and calendered together.

APPLICATIONS:

- Bonding / laminating by hot-melt

CENTRAL MACHINE BODY

Ergonomic solid and robust structure composed of iron shoulders machined with numerical control machine, where the following devices are installed:

CALENDER GROUP

Calender complete with doctor blade (Ref. 7) repositionable for distribution of hot-melted polymers (Monti Antonio S.p.A. system), isolated and coated with a special teflon for anti-sticking purposes.

ENGRAVED CYLINDER (re.7 – 8 of the attached drawing)

- Engraved cylinder (re. 8) Ø235 mm (9,25"). for the polymers distribution. This cylinder is chrome plated in order to support the friction with the doctor blade and it is heated by electric armoured resistances, which are immersed in diathermic oil bath.
- The working temperature, electronically controlled is adjustable from room temperature up to 230°C.
- Doctor blade (ref.) for the distribution of fuse polymers, in aluminum (Anticorodal) heated (Monti Antonio S.p.A. system), isolated and coated by a special anti-sticking teflon.
- Complete with movable lateral seals for adjustment of the coating width.

PRESSING CYLINDER FOR ENGRAVED CYLINDER (re.9 of the enclosed drawing)

- Silicon coated pressing cylinder Ø255 mm (10,04"), installed on self-aligning supports in order to grant a perfect contact with the engraved cylinder (ref. 8). The rotation of this cylinder is granted by motorisation while its pressure by two pneumatic pistons fed with compressed air with adjustable pressure up to 6 Kg/cm .
- On the each piston (one per side) acts one actuator which allows to control precisely the distance of the pressing cylinder (ref. 9) in relationship the cylinders (ref. 8) (gap adjustable up to mm.40)
- It is foreseen the possibility of installing a chiller unit (optional) for the cooling of this cylinder.

COATING CYLINDER (re.41 of the attached drawing)

- Chrome-plated coating cylinder, Ø235 mm (9,25").
- The rotation of this cylinder is granted by motorization while its pressure by two pneumatic pistons fed with compressed air with adjustable pressure up to 6 Kg/cm . On each piston (one per side) acts one actuator which allows to precisely control pressing cylinder distance (re.13) in relationship to the cylinder (ref. 9) (gap adjustable up to mm. 40)

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UPPER MATERIAL ENTRY (re. 2 of the attached drawing)

- The upper material unwinding (re.2 of the attached drawing) is motorized and synchronized to the main machine thanks to the control of a load cell (re.4 of the attached drawing). These tension control systems allow also the control of elastic fabrics, as well as delicate and foamed materials.

MEMBRANE / LOWER MATERIAL BREAKED ENTRY, (re.24 of the attached drawing)

- Pneumatic expansion shaft for unwinding the lower material in entry. This unwinding position is synchronized with the machine thanks to a small motorized calender and controlled by dancing roller in order to grant a precise tension control.

OPENING ROLLER WITH ELASTIC CORDS, MOTORIZED (ref.12 18-25 of the attached drawing)

Motorized spreader roller to spread materials and eliminate eventual pleats. Thanks to its motorization this spreader roller can be also used for the tension control of the material in entry (ref. 2-24)

SINGLE WINDER IN EXIT (ref. 20 of the attached drawing)

- It is equipped with independent motor. It is supplied with axial winder and pneumatic expansion.

MECHANIC SPEED

The machine is equipped with motors which allows a mechanic speed from 2 to 30 m/min. (**standard machine**)

MOTORIZATIONS

- All movements are supplied by means of asynchronous motors, three phase, servo ventilated, which transmit movements to roller with reduction gears.
- The motor of the pressing cylinder (ref. 9) has "master" function. All other motors have "slave" functions.
- The speed of all motors is synchronized and any variation registered by the "master" is effecting automatically on all "slaves".
- The control of all motors is done by vector inverters, with plc.

ELECTRIC/ELECTRONIC CONTROL PANEL

- The cabinet is in metal sheet, with protection IP54, and it includes all inverters, contactors, etc.

AUTOMATION

- It is controlled by a OMRON PLC, in communication with gears by ETHERCAT net.
- Front operator panel : colours LCD touch-screen resolution 800x480 pixel, screen 10,4", complete with Ethernet plug.
- Rear operator panel : colours LCD touch-screen with TFT – resolution 800x480 pixel, screen 10,4", WIDE SCREEN complete with Ethernet plug.

TECHNICAL DATA

- Adjustable working width up to mm 1800 (70.87")
- Working speed adjustable from 2 to 30 m/min.
- Installed power of complete machine: Kw 23,5
- Average electric consumption of the complete machine: Kw/h 15,5
- Compressed air pressure: 4-8 Bar
- Weight: 3.500 Kg
- Machine produced according to CE rules
- Customs tariff: 84 51 80 80

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OPTIONS

PNEUMATIC EXPANSION SHAFT, ROTATING HEADS

PNEUMATIC EXPANSION SHAFT, MONTI CONNECTIONS (till 250 Kg)

CHILLER UNIT FOR SILICON COATED CYLINDER (ref. 9 of the attached drawing)

PUR FUSER, N°1 – 200 Kg.

- Drum melter of 200 liters for fusing reactive polymers and having a capacity of 50/60 Kg/h. It is equipped with two heated tubes and pertaining heads (duly isolated) to keep the polymers melted until the distribution device
- Installed power: 30 Kw

ADDITIONAL ENGRAVED CYLINDER

Engraved cylinder Ø235 mm (9,25") for polymer distribution. This cylinder is chrome plated in order to support the friction with the doctor blade and it is heated by electric armoured resistances, which are immersed in diathermic oil bath.

PRESSING GROUP (Ref. 13 of the enclosed drawing)

- Silicon coated cylinder, suitable for cooling (cylinder Ø 215 mm (8,46"))
- Opening roller with slats, motorized (re.25 of the attached drawing)

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