

MODEL H02-2000

Very versatile calender specially designed for bonding / laminating / 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 bonded to the first one.

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:

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 180°C.
- Doctor blade (re. 7) for the distribution of fuse polymers, in aluminium (Anticorodal) heated up to 160°C. (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 (re. 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 2,5 Kg/linear cm.
- On each piston (one per side) acts one actuator which allows to control precisely the distance of the pressing cylinder (re. 9) in relationship the cylinders (re. 8) (gap adjustable up to mm.40)
- It is foreseen the possibility of installing a chiller unit (optional) for the cooling of this cylinder.

PRESSING CYLINDER (ref. 14 of the attached drawing)

- Chrome-plated pressing 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 3,6 Kg/linear cm. On each piston (one per side) acts one actuator, which allows to precisely control the distance in relationship to the cylinder re.9 and in relationship to the cylinder re. 13 (optional).
- It is foreseen the possibility to install a chiller unit (optional) for the cooling of this cylinder

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

Chromed unwinding shaft Ø 34 mm., with Monti connection, with cones for unwinding of upper material in entry (ref. 2 of the attached drawing). This unwinding position is motorized and synchronized with a load cell (ref. 4 of the attached drawing). The same axle is also pneumatically braked for a better control of delicate materials.

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

Pneumatic expansion shaft with Monti connection for unwinding the lower material in entry. This unwinding position is synchronized with the machine thanks to a small motorized calender (ref. 40 of the attached drawing) and controlled by load cell (ref. 4 of the attached drawing) in order to grant a precise tension control.

All data and technical features are purely indicative and subjected to changes without prior notice.

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RECOVERY OF MEMBRANE PROTECTION

Small motorized axial winder (ref. 3 of the attached drawing) for the recovery of the membrane protection/carrier. It is characterized by an aluminium shaft with blue cords for the card-board cores fixation.

OPENING ROLLER WITH ELASTIC CORDS, MOTORIZED (re.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 (re. 2-24)

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

It is equipped with asynchronous motor controlled by a load cell (ref. 4). It is supplied with axial winder with pneumatic expansion shaft with Monti connection.

MECHANIC SPEED

The machine is equipped with motors, which allows a mechanic speed from 2 to 30 m/min.

MOTORIZATIONS

- All movements are supplied by means of asynchronous, three phase, servo ventilated, motors which transmit movements to the roller with reduction gears.
- The motor of the pressing cylinder (re. 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 transferred automatically on all "slaves".
- The control of all motors is done by vector inverters, with plc.

PNEUMATIC EXPANSION SHAFT, ROTATING HEADS

ELECTRIC/ELECTRONIC CONTROL PANEL

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

AUTOMATION

- It is controlled by an 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 (71")
- Working speed adjustable from 2 to 30 m/min.
- Installed power of complete machine: kW 24,5
- Average electric consumption of the complete machine: kW/h 16
- 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

CHILLER UNIT FOR SILICON COATED CYLINDER (re. 9 of the attached drawing) AND/OR FOR PRESSING CYLINDER (re.14 of the attached drawing)

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 WITH OPENING ROLLER WITH ELASTIC CORDS Ø MM. 120, MOT. (re.12- 13 of the enclosed drawing)

- Silicon coated cylinder Ø 215 mm (8,46") re.13, suitable for cooling
- Opening roller with elastic cords Ø 120 mm (4,72"), motorized, re.12

PUR FUSER, N°1 – 200 Kg.

- Drum melter of 200 litres 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

PNEUMATIC EXPANSION SHAFT

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