

# Rapid-Köthen Automatic sheet forming machine

Product code [RL-MU-A](#)

## RYCOLAB



### Usage

For the production of standardized paper sheets in the laboratory (ø 200 mm)

### Applicable standards

ISO 5269/2, DIN 54358, Zellcheming Merkblatt V/8/76

### Characteristics

- PLC controlled automatic process.
- Full colour control touch screen. Through this screen, the operator can manage all the equipment functions.
- The process can be also controlled in "manual" mode.
- Strong and robust construction equipment. Made of stainless steel and polypropylene.
- Integrated electric cabin with protection system (CE).
- Light weight dryer cover for easy handling.
- Spacious work surface with an area for accessories and utensils.
- Simple push-button control for start / stop of the drying process.
- Drying temperature  $93 \pm 1$  C with water recirculation (according to standard).
- Four models available: with 1, 2, 3 or 4 dryers.
- White Water recirculation system (as optional).
- CE mark.



Measure



Improve



Service



## Test description

Once the liter of pulp is prepared as indicated by the standard, the sheet forming process with the RK former commence by pressing the START button. When the volume of 4 liters is reached, we will add the prepared sample. Once the level of 7 liters is reached, the equipment stops automatically with its level detectors. The suspension is then shaken with compressed air for 5 seconds, with a micro bubble system. The suspension will rest 5 seconds before starting to drain automatically, and start the formation of the sheet on the forming screen. The drainage first occurs, facilitating an escape of air during 2 seconds under the screen and applying suction for 10 seconds after the water level has passed through the new sheet formed. Open the forming column and position the carrier board on the newly formed wet sheet (with its soft face toward the wet sheet). Apply now the supplied couch roll on the packet formed by the wet sheet and the carrier board. Remove now the packet formed by carrier board + wet sheet + forming wire screen from the cloumn. Hit the set in a slight angle on the rubber basis to release the sheet from the forming wire screen.

Adjust the timer of each dryer to the required drying time. This time will depend on the sheet weight and can vary between 5 and 10 minutes. Place the wet sheet, still adhered to the carrier board, on the support mesh of the dryer, with the carrier board facing to the dryer surface. This operation must be done within 1 minute from the moment the formed sheet has been removed from the forming column.

Place a cover sheet on the wet sheet and close immediately the dryer lid, exercising some force to achieve an hermetic closing. Push the "Start" button of the dryer, the main Pump will commence to operate to achieve a vacuum pressure. The dryer "Start" button will light, indicative that the dryer is operating. The system will apply a vacuum pressure of approximately -950 mbar.

When the configured drying time has ended, an acoustic signal will activate during some seconds and the dryer red "Stop" button will light (in this moment, both dryer buttons, "Start" and "Stop" will light). For ending the drying process and removing the sheet from the dryer, push the "Stop" button.

The sheet forming process has a total duration of about 1 minute. The drying times have an average duration of 6 minutes. Therefore a machine with three dryers can produce about 30 sheets per hour.

## Dimensions

RK-1A: 1510 x 860 x 1450 mm (WxDxH) + with KWT: 1840 (H).

RK-2A: 1690 x 860 x 1450 mm (WxDxH) + with KWT: 1840 (H).

RK-3A: 2020 x 860 x 1450 mm (WxDxH) + with KWT: 1840 (H).

RK-4A: 2350 x 860 x 1450 mm (WxDxH) + with KWT: 1840 (H).

Transport box : + 200 mm

RK-1A: 350 Kg. / Gross 500 Kg

RK-2A: 370 Kg. / Gross 520 Kg

RK-3A: 390 Kg. / Gross 540 Kg.

RK-4A: 450 Kg. / Gross 560 Kg.

## Connections

Electrical : 400 V, 50 Hz or 440/460V, 60Hz (indicate in the order)

Connection for 1/2 " pipe . Min. 50 mm drain.

Compressed air : 600 kPa.