

Sheet Former

Square & Rectangular (Rapid Köthen System)

Code: P.506.xxx.xx

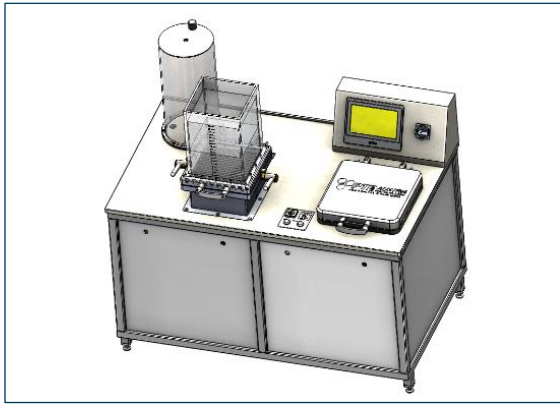
Usage

To prepare laboratory sheets of pulp for physical testing.

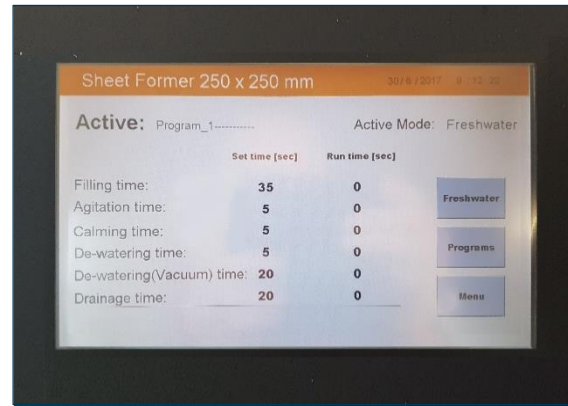
Applicable standards

- ISO 5269-2
- DIN 54358





Square sheet former with 1 dryer & white water tank



Easy operation via touchscreen

Device description

The Square or Rectangular Sheet Former is built upon a warp resistant stainless steel frame. This robust base holds the pump, hot water bath, suction chamber, etc. On the left-hand side of the working table you can find the sheet forming column. The square dryer is located on the right-hand side. There are only a few important control switches on the working table in order to ensure work space for the transferring process between sheet former and dryer. The sheet forming process is controlled by a Simatic control system. The temperature and the vacuum of the drying process are adjusted on the touchscreen.

Process description

The sheet forming process is started by pushing the start button. First the water is filled into the acrylic glass cylinder (on the left side behind the forming column). Now the device will take the water from this acrylic glass cylinder and fill the sheet forming column with water. When the water level reaches the 4 liters mark add the disintegrated suspension. The device will continue filling the column with water until it switches to the next step: "agitation". According to the standard an agitation period of 5 seconds is required before the next step follows: "calming" for another 5 seconds.

After the calming, it switches to the "drainage" position whereby a valve is opened to let the suspension drain. The fibers are collected on the sheet forming screen. To increase the draining speed the next position is the "vacuum" position. On that position the vacuum pump starts to suck the remaining water through the screen with a pressure of -0.27 bar (can be regulated also for higher vacuum). When all the water is drained, a freshly formed sheet remains on the screen. Now the former column can be opened and the formed wet sheet can be covered with a square carrier board, couched with the delivered couch roll and after detaching transferred to the dryer.

Drying process description

First the cover of the dryer is opened. The fresh prepared sheet – laying on the carrier board – is taken off the former screen (the carrier board is bottom side; the fresh prepared sheet is on top). Now you can cover the fresh produced sheet with a square cover sheet, put it into the dryer, start the drying process by pushing the start button. Rubber membrane will be pressed down against the sample by the vacuum. Due to hot water behind the membrane (flowing with 93 – 97 °C) the sample is dried, because the vacuum is taking the water away. The dryer will beep after the pre-selected time is over (normally 10 minutes with a 70 g/m² sheet). By pressing the stop button the vacuum is released, the dryer can be opened and the sheet can be taken out. After climatization the sheet in a conditioned room (23°C / 50% rel. Humidity) it can be tested.



Sieve exchange



Former column & white water system

White water circulation system

The sheet forming process starts, when water is taken out from the acrylic glass storage tank and used for the sheet production. This water can be pumped back into the acrylic glass storage. Example: After 10 sheets have been made, there are chemicals from the forming process in the storage tank. The water in the storage tank can now be drained (there is a pipe outlet on the left side of the sheet former) and can be analyzed for chemicals. With this system the detection of an overdose of chemicals is possible. First the suspensions with 1%, 2%, 3%, up to 8% or 9% of chemicals inside are prepared and sheets are manufactured. If there are more chemicals with a certain concentration (e.g.: 5%) in the water, it implicates that the water is overdosed and the chemicals in this concentration will not react with the paper anymore.

Specifications

- top quality and manufacturing
- built into a sturdy stainless steel frame
- former column made from stainless steel
- integrated water-resistant touchscreen control panel
- easy and intuitive operation via touchscreen
- fully automatic sheet forming
- additional 6-position switch to change to manual sheet forming at any time

White water circulation system

- white water tank for saving the water used for sheet forming
- white water tank able to heat up to 60°C
- switchable water source: tap water or white water
- tap on the side to take out the white-water for chemical analysis

Connections

- Electricity: 230 V, 50 Hz AC without dryer (other voltages on request possible)
400 V, 50 Hz AC with dryer (other voltages on request possible)
- Air: 400 – 600 kPa
- Water: tap water connection required
- Drainage: Ø50 mm drainage pipe

Models

Code	Type	Sheet Size	Dryers	System
P.506.150.A0	Square	150 x 150 mm	none	automatic
P.506.150.A1	Square	150 x 150 mm	1	automatic
P.506.150.A2	Square	150 x 150 mm	2	automatic
P.506.150.A3	Square	150 x 150 mm	3	automatic
P.506.150.C0	Square	150 x 150 mm	none	automatic & white water circulation
P.506.150.C1	Square	150 x 150 mm	1	automatic & white water circulation
P.506.150.C2	Square	150 x 150 mm	2	automatic & white water circulation
P.506.150.C3	Square	150 x 150 mm	3	automatic & white water circulation
P.506.165.A0	Square	165 x 165 mm	none	automatic
P.506.165.A1	Square	165 x 165 mm	1	automatic
P.506.165.A2	Square	165 x 165 mm	2	automatic
P.506.165.A3	Square	165 x 165 mm	3	automatic
P.506.165.C0	Square	165 x 165 mm	none	automatic & white water circulation
P.506.165.C1	Square	165 x 165 mm	1	automatic & white water circulation
P.506.165.C2	Square	165 x 165 mm	2	automatic & white water circulation
P.506.165.C3	Square	165 x 165 mm	3	automatic & white water circulation
P.506.200.A0	Square	200 x 200 mm	none	automatic
P.506.200.A1	Square	200 x 200 mm	1	automatic
P.506.200.A2	Square	200 x 200 mm	2	automatic
P.506.200.A3	Square	200 x 200 mm	3	automatic
P.506.200.C0	Square	200 x 200 mm	none	automatic & white water circulation
P.506.200.C1	Square	200 x 200 mm	1	automatic & white water circulation
P.506.200.C2	Square	200 x 200 mm	2	automatic & white water circulation
P.506.200.C3	Square	200 x 200 mm	3	automatic & white water circulation
P.506.250.A0	Square	250 x 250 mm	none	automatic
P.506.250.A1	Square	250 x 250 mm	1	automatic
P.506.250.A2	Square	250 x 250 mm	2	automatic
P.506.250.C0	Square	250 x 250 mm	none	automatic & white water circulation
P.506.250.C1	Square	250 x 250 mm	1	automatic & white water circulation
P.506.250.C2	Square	250 x 250 mm	2	automatic & white water circulation
P.506.300.A0	Square	300 x 300 mm	none	automatic
P.506.300.A1	Square	300 x 300 mm	1	automatic
P.506.300.A2	Square	300 x 300 mm	2	automatic
P.506.300.C0	Square	300 x 300 mm	none	automatic & white water circulation
P.506.300.C1	Square	300 x 300 mm	1	automatic & white water circulation
P.506.300.C2	Square	300 x 300 mm	2	automatic & white water circulation
P.506.320.A0	Square	320 x 320 mm	none	automatic
P.506.320.A1	Square	320 x 320 mm	1	automatic
P.506.320.A2	Square	320 x 320 mm	2	automatic
P.506.320.C0	Square	320 x 320 mm	none	automatic & white water circulation
P.506.320.C1	Square	320 x 320 mm	1	automatic & white water circulation
P.506.320.C2	Square	320 x 320 mm	2	automatic & white water circulation
P.506.320x270.A0	Rectangular	320 x 270 mm	none	automatic
P.506.320x270.A1	Rectangular	320 x 270 mm	1	automatic
P.506.320x270.A2	Rectangular	320 x 270 mm	2	automatic
P.506.320x270.C0	Rectangular	320 x 270 mm	none	automatic & white water circulation
P.506.320x270.C1	Rectangular	320 x 270 mm	1	automatic & white water circulation
P.506.320x270.C2	Rectangular	320 x 270 mm	2	automatic & white water circulation

Other customized solutions are available!

For more information ask your personal distributor or PTE Austria directly!