

FIBRE OPENER

Operating instructions

REV No.	DATE	DESCRIPTION	EDITED	CHD.	APPD.
1.0	20.2.2020	Initial version	SRa		

“Fibre Opener”

aka

Mesdan Lab Trash Analyzer 281C

The machine is located in the A!Bio hall, near to the spinning lab, room 261. It is originally used to process cotton fibres, but here at Aalto is mainly utilized as a fibre opener.

Image 1 – Operating end of the machine



The user accessible parts of the machine are two compartments, an operating panel and two drawer like filters. On the front or operating end (See Image 3) there is the operating panel and the trash collection compartment.

Image 2 – Collector compartment and filters



The other compartment, where the opened fibres will be collected, is on the other end. Below that are two filters of different mesh sizes that can be pulled out by the handle (See Image 2).

There are two mechanical latches and a magnetic lock on both of the compartment doors. Turning the knobs on the doors outwards (left one counter-clockwise, right one clockwise) opens the latches. When the *Open Doors* button is lit, you can hold it down to disengage the magnetic locks enabling you to open the compartment door(s).

Preparations

Have your fibres ready and dry. If further processing, such as carding, drafting etc. will be done, make sure you have done necessary washing and/or finishing treatments beforehand.

First make sure the mains power plug is connected to the wall socket and the pressured air quick connector to a wall outlet (See Image 3). Open the pressured air valve on the wall outlet as well.

Image 3- Power and pressured air connected, air valve closed



The mains switch is located on the left side of the machine, turn it on. Wait for a moment until the *Open Doors* indicator lights up. The machine is now powered but in safety mode – you have to use the *Reset Safety* switch before you can start the machine (See Image 1).

Cleaning

Clean both two main compartments, paying also attention to the roller blades. Once in a while see if the filters need your attention. You can use a vacuum cleaner for cleaning.

Insert the metal feeding slab on the operating end slot. Make sure the compartment doors are closed and locked. Cycle the *Reset Safety* switch and push the *Start* button. The machine should start. If not, check the doors, use the *Reset Safety* switch and try again.

Run the machine empty for a while and clean again. Repeat if necessary.

Processing

After you have made sure there's no fibres from previous runs, you can start the main process. Feed small amounts of fibres at a steady pace, opening them by hand into a light layer. Be safe and if need be, use a tool to push the fibre mat onto the rollers.

The machine can get clogged if too much fibres are fed at once! Too tightly bound fibre bundles might not be opened well, which you can see in the end result.

Nevertheless some of the fibre mass will eventually end in the “trash collection” compartment. You can recollect them and feed again to get everything used. Discard nips or other defects.

After use please repeat cleaning process. Turn off the unit from the mains switch and close the air valve. Remove the feeding slab and store on or near the machine.