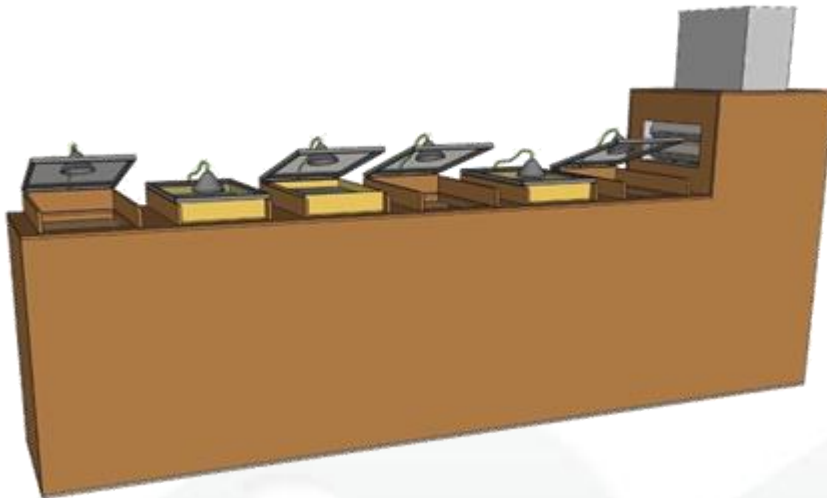
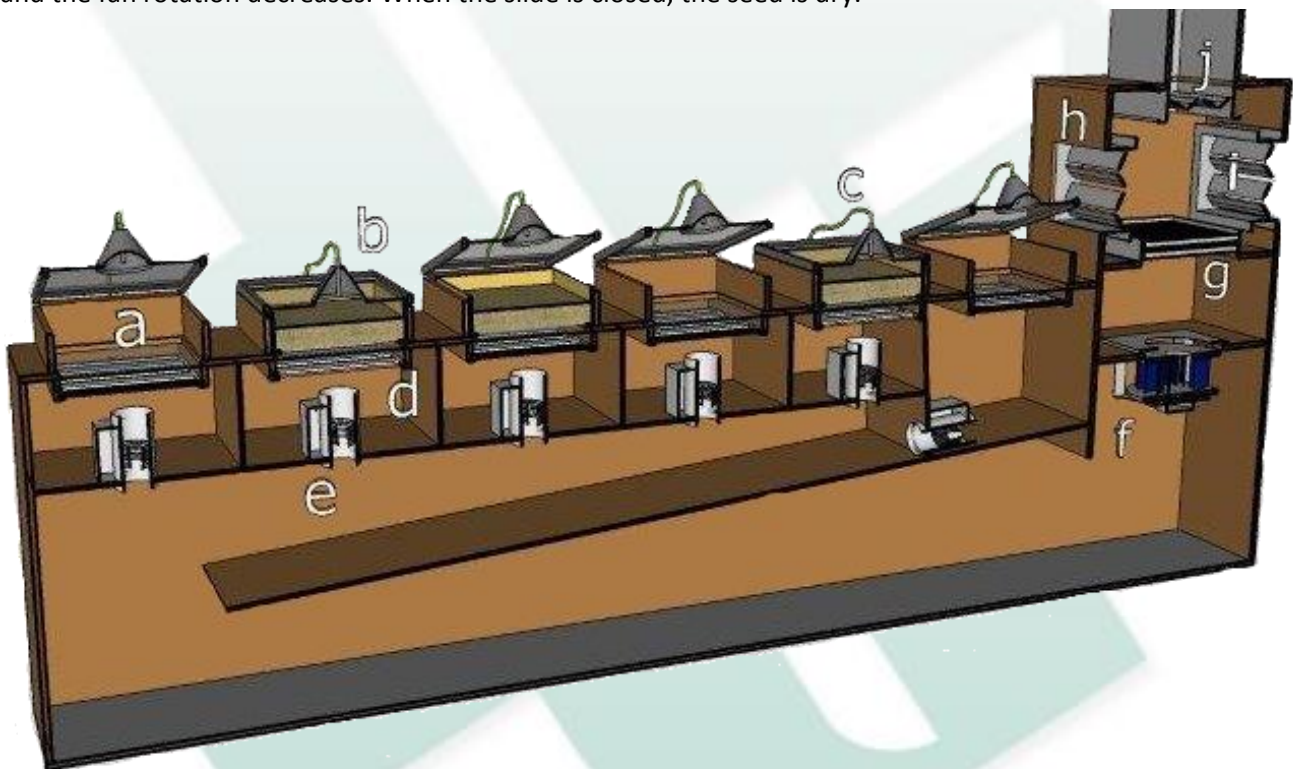


Tray dryer for automatic seed drying



Drying of a small amount of seed does not always get the attention it deserves. The tray dryer of Agratechniek dries the seed in every tray automatically to the desired moisture content. This can vary per tray. The drying process starts automatically when the tray is placed and the mesh lid (b) is closed.

The fan rotation (f) will increase to create the desired amount of additional air. A T° and RH sensor (c) above each tray measures the air from the seed. When the desired moisture content is reached, the slide (d) closes gradually and the fan rotation decreases. When the slide is closed, the seed is dry.

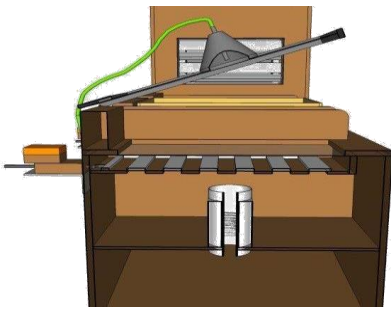


Cross section of the static tray dryer (in this example containing 6 trays; more or less trays is possible):

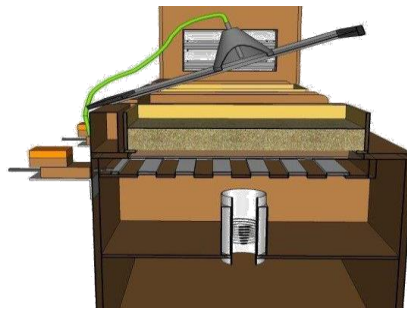
- | | |
|--|---|
| a) Place a tray with an opened mesh lid. | f) Central fan for air measurement |
| b) Tray placed and mesh lid closed. | g) Heating radiator for desired basic T° |
| c) Measurement of T° and RH of the air from the seed | h) Valve register for inside air (recirculation). |
| d) Slide for automatic opening and closing. | i) Valve register for aspiration of outside air. |
| e) Electrical heating for additional heating up. | j) Valve register for supply of dried air. |

The electric heating (g) ensures a separate temperature can be provided per tray or per drying phase. After the desired time or desired moisture content, the T° can be readjusted in a next phase.

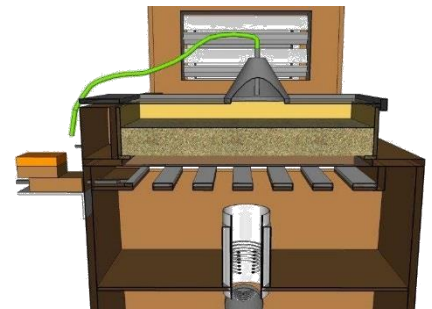
Tray dryer for automatic seed drying



Cross section without tray; the lid with sensor (c) has been opened to place a tray.



Cross section of tray with mesh lid still open; drying process has not started yet

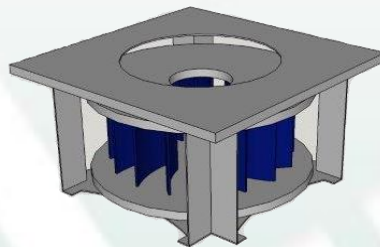


Cross section of tray during drying process; mesh lid closed and slide (d) opened.

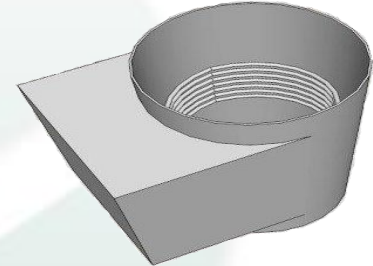
The fan automatically provides more air when an additional tray is placed. When the seed in a tray begins to dry, the slide (d) closes gradually. When this occurs, the air quantity will decrease automatically, during which the desired moisture content is maintained.



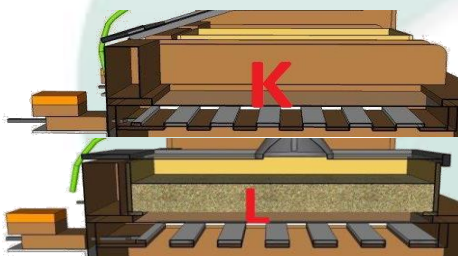
The T°+RH measurement sensor (c) has been mounted onto the cover grid using a funnel, to measure the air condition from the seed.



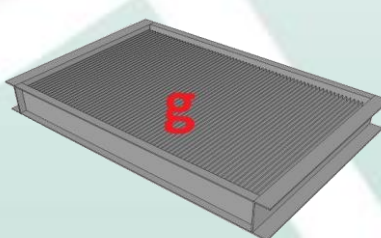
A high pressure fan (f) with built-in air measurement can give additional air quantity when placing a tray.



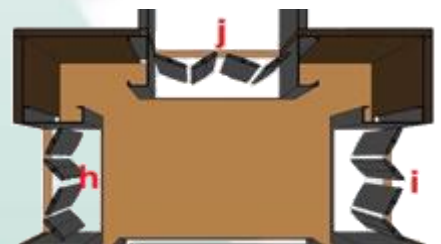
An electric heating (g) ensures the air T° can be heated up additionally per phase.



The slide is closed when no tray has been placed and the lid is opened (K). The slide is opened to dry a tray of seed with a closed lid (L).



A heating radiator (g) ensures the air is heated up to a desired basic T°. Afterwards the T° can be heated up additionally per phase.



Valve section for aspiration of inside air (h), outside air (i) and dried air (j) from the central air dryer.

The dried air from the central air dryer mixes with the inside or outside air. Therefore, it continuously creates the desired moisture content of the air. This can vary per phase. The drying process takes place completely controlled and always reaches the desired moisture content.

The drying process usually stops when the air from the seed has reached the desired moisture content. Therefore the air from the seed will be measured (c). Another possibility is to end the drying process when a desired amount of moisture around the seed has been evaporated. Drying process will stop when the original weight of the seed has been reached.