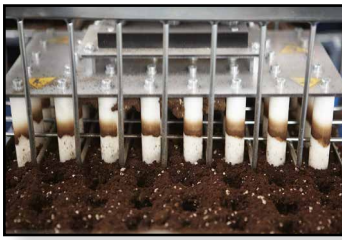


The BCC Flexi Filler

Products & Solutions for forest nurseries

BCC Flexi Filler is designed to achieve precision filling and to handle a large range of different growing substrate. Root system development is one of the most important quality criteria when evaluating forest seedlings and cuttings. During the propagation of seedlings and cuttings oxygen supply in the substrate is crucial for all anaerobic processes. Therefore optimal filling and compaction of the growing media is required for root initiation, germination and consequent root development.



vibration and active compaction filling



less than 5% variation in cellweight



fast and accurate filling



excess media removed from the tray

FLEXI FILLER

The BCC Flexi Filler is designed to achieve precision filling and to handle a large range of different media. Filling trays properly, i.e. every cell being filled with exactly the same volume and compaction of growing substrate is critical for:

- Root initiation
- Seed germination
- Short rooting period window
- Development of cuttings and seedlings

THE PROCESS

Substrate

Substrate is automatically fed from the Batch Mixer/ or Big Bale Dosage Bunker to the Flexi Filler when substrate is at a low level in the hopper. This ensures continuous supply of substrate for the filling process.

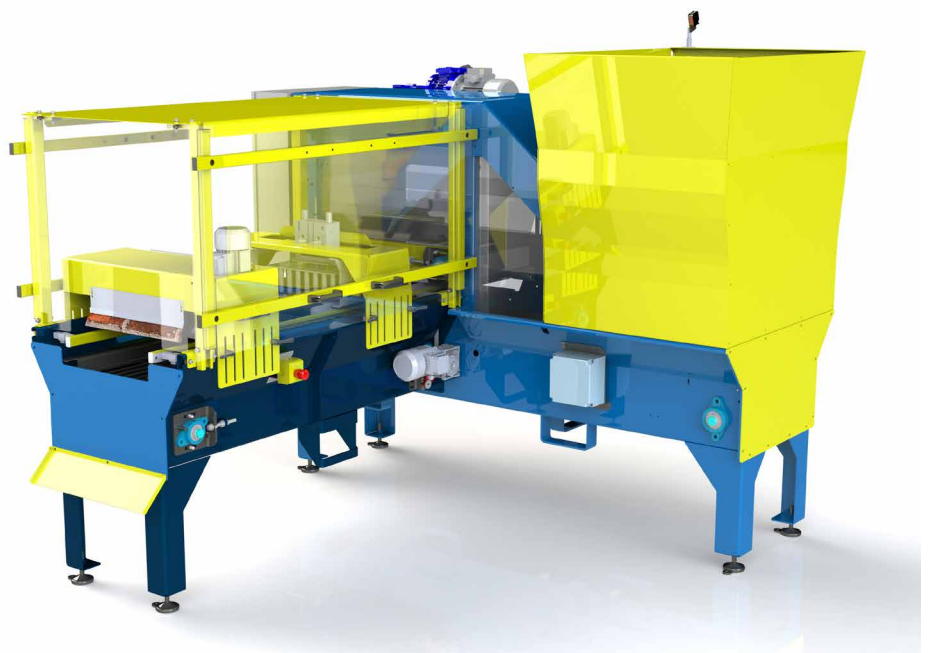
Trays

Tray feeding into the Flexi Filler is automatically done by a pneumatic pusher - no belt conveyors are used. The speed of the pusher is adjustable for different feeding capacities and a wide range of tray types can be handled. For filling, the tray is positioned on the vibration plate below the bridge of the Flexi Filler.

The filling process involves two stages – filling by vibration and active compaction..

Vibration filling:

Substrate is transported from the hopper by a main feeding chain to the overhead bridge of the Flexi Filler. A distribution chain ensures even substrate distribution over the entire tray. During this process the tray is continuously vibrated for initial filling.



Active compaction:

The tray is positioned under the compaction plate. For active compaction, a layer of floating substrate on the tray is required. The compaction plate is fitted with fingers according to the size of the cell. The fingers are pushed pneumatically into the cells. The floating media drops into the cell when the fingers are retrieved. During the compaction process, the tray is vibrated continuously. Compaction depth as well as single or double compaction is pre-set. After compaction the final stage of filling is done by the plough and excess media removed from the tray. A return chain in the base of the Flexi Filler returns surplus substrate to the hopper.

Active compaction for single cell trays:

Special support plates are added to adequately support the single cells during the filling process.

For more information, please ask your BCC representative.

OPERATIONAL BENEFITS & KEY FEATURES

- Accurate filling and compaction creates optimum conditions for seedling and cutting propagation.
- Even filling and precise compaction with less than 5% variation in cell weight.
- Two stage filling: vibration and active compaction filling.
- Handles a wide range of growing substrates.
- Compatible for different tray types.
- Adjustable tray feeding speed.
- Integrated 500 litre substrate hopper linked through a level sensor with the batch mixer for automated filling.
- Fully adjustable vibration frequency.
- Single or double active compaction with adjustable compaction depth.
- Fast and accurate filling.
- Adjustable hatches allow for exact substrate feeding.
- Automatic return of surplus growing substrate minimises waste.



ACCESSORIES AND EXTRA FEATURES

- Modified substrate hopper to accommodate Big Bale Dosage Bunker.
- Pneumatic locking cylinders and bottom supporting plate for single cell systems.
- Height adjustment of distribution chain, compacting unit and brush by crank handle or pneumatic cylinders.
- Modified to be operated as a stand-alone unit with semi-automatic processes for smaller scaled nurseries and where labour costs are not a limiting factor.
- Pressure gauge on compactor unit to monitor compaction rate.
- Spring-loaded fingers on compactor unit to avoid over compaction when using growing substrates with irregular particle size.

TECHNICAL DATA

In Feed Pusher

Compressed air consumption: supplied from main valve on the filler

Filler

Dimensions (L x W x H): incl in feed pusher 3600mm x 2400mm x 1850mm

Weight: 850kg

Power supply:

Power requirement: 3 x 400V, 50Hz

Compressed air consumption: 2.0kW

Maximum production capacity: 500 litres/minute at 6Bar

HIKO*: 20 trays/minute

Plantek & BCC SideSlite*: 13-18 trays/minute

96 Insert Frame*: 10 trays/minute

* Note that the equipment can be customized to meet individual requirements

Disclaimer - As BCC AB equipment is continuously developed and refined, the design and capacity can differ from the figures listed here.

