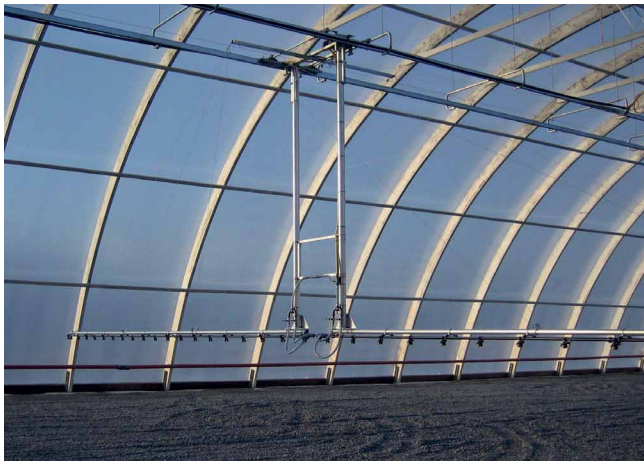
Products & Solutions

for forest nurseries

Plant the Planet



The BCC Greenhouse Boom

BCC

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roof mounted rail

new flexible control unit

hose car

fluorescent lights mounted on the boom

The BCC Greenhouse Boom

To ensure optimum germination success it is essential that each individual plant receives the correct amount of water throughout the greenhouse phase. Since the surface area of each tray cell is relatively small, the quality of application is even more vital. Further to this, the limited volume of moisture reserves in small containers also means that critical moisture stresses can develop quickly.

The BCC Greenhouse Irrigation Booms fulfil the above water application requirements for containerized forest nurseries while guaranteeing flexible and reliable functioning.

THE PROCESS

The BCC Greenhouse Irrigation Boom design is based on a modular concept. Features can be adjusted and added according to growing requirements.

Boom arms with spray line and nozzles:

An additional spray line with lower flow rate nozzles (for misting/chemical treatment) can be added to the boom arms. Main spray line is for irrigation/fertigation. Alternatively to an additional spray line, triple nozzle holders can be fitted to the main spray line with different flow rates for various
applications, e.g. watering, misting, fogging,
chemical treatments. A wide range of nozzles are available for various applications and depending on physical requirements in the greenhouse, e.g. spray pattern, spray angle, flow rate and droplet size. Edge irrigation nozzles are also available to prevent
drying out of substrate along edges and walkways. Additional nozzles are added for higher flow rates along the edges.

Single or double rail:

The type of rail system, boom rail length and boom arm width are determined by the greenhouse dimensions. Single rail systems are suitable for narrow, smaller greenhouses with widths of up to 16 m. Larger and wider greenhouses of up to 25 m require a more stable construction, making the double rail system a more ideal solution. Maximum operational boom rail length is limited to 100m for both single and double rail systems.

Chemical dosage unit:

A chemical dosage unit can be mounted on the boom carriage for direct fertilizer and chemical injection. Application rate is adjustable from 0.2% – 2.0% on the dosage unit. A chemical batch solution tank with 35 liter

capacity is also mounted on the carriage. Larger batch tanks are available. Direct injection of chemicals into the spray line ensures an even application of fertilizers and fungicides to the seedlings.

Flexible control unit:

Boom operation can be adjusted for continuous running mode or pre-set running mode. When operated in pre-set running mode, a selection switch can be used to run the boom for a number of cycles. Water supply to the boom can be regulated remotely from the control panel via a solenoid valve on the main water supply line. Multiple spray lines on the boom arms can also be regulated via solenoid valves from the control panel. Frequency control is available for variable speed of the boom to manipulate quantity of water applied

The control unit can equip in three different types: Type 1 (Manual), Type 2 (Auto) and Type 3 (Range).

Type 1 - Manual	**Type 2 - Auto**	**Type 3 - Range**
start stop recall of boom to home position choice of water or fertilizer (control two solenoid valves) amount of cycles before stop choice of drive speed (regulated by access code)	same functions as type 1 possibility to program up to 24 different operations for 10 programs. programmable start timer per operation programmable amount of cycles per operation programmable drive speed per operation programmable water/fertilizer on "away from home" route per operation possible to control the points above from a remote point	same functions as type 1 same functions as type 2 Programmable drive range from home position per operation (irrigate/fertilize in sections)

Note! The benefit of two solenoid valves is ONLY obtained if the customer uses a central fertilizing system controlled with solenoid valves. It is NOT possible to control a solenoid valve with injector with separate tank.

Boom start-up and shut-down can be controlled manually or activated by built-in timer. The timer is programmable for daily irrigation regimes. An external input for remote start signals from another source is also available.

OPERATIONAL BENEFITS & KEY FEATURES

- Overhead truss-mounted single or double rail system for greenhouse width of up to 25m.
- Overhead rail system ensuring optimum space utilization of greenhouse.
- Hot-dipped galvanized overhead rail for corrosion protection.
- Suspended cable and hose fitted to the rail with rollers for electricity and water supply.
- Galvanized light-weight carriage incorporating drive motor.
- Nylon-coated wire ropes connecting the boom arms with the carriage ensure stability.
- Light-weight aluminum boom arms adjustable for height above seedlings.
- Single PVC spray line fitted with flat spray pattern nozzles (2.3 liters/minute at 150kPa) mounted to boom arms at intervals of 600mm to ensure sufficient overlap of the spray fan.
- Direct water application to plants ensuring even coverage for optimum germination success.
- Central control panel for easy boom operation.

ACCESSORIES AND EXTRA FEATURES

- A set of fluorescent lights mounted on the boom and regulated from the control unit provide a solution to prolong the growing period during dark seasons. A choice of other functions like water filters, pressure gauges and safety functions like emergency stops and pressure drop sensors for detection of hose breakage are available as options.

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TECHNICAL DATA

Single-rail:	**Length – 100 m effective (greenhouse length 94 m)** **Width – 12-16 m**
Double-rail:	**Length – 100 m effective (greenhouse length 97 m)** **Width – 25 m**
Power supply:	**1 X 230V, 50Hz (depends on requirement)**
Power requirement:	**0.5kW**
Operating pressure:	**2-3Bar – recommended in spray line**
Water supply pressure:	**5-6Bar – recommended at point of connection**
Operating speed:	
Variable speed:	**0–10m/min**

*** 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.

BCC
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