



## Perfect VPD

Achieving the optimal VPD for plants allows them to properly transpire, uptake nutrients, uptake CO<sub>2</sub>, and prevent stress. VPD stands for Vapor Pressure Deficit, a direct correlation between the temperature and humidity of an area.

Traditional cloning involves using individual domes for each set of clones, essentially creating a microclimate to achieve the higher humidity levels within the dome (lower VPD) to establish roots. This method works great, so long as you maintain consistent air exchange and environmental levels.

VPDome™ helps maintain the perfect VPD throughout the cloning process. Using VPDome™ for large scale cloning requires much less labor than ventilating individual domes every day.

## Establish the Environment

Ensure the environment where the VPDome™ is placed is optimal for clone growth after hardening off. The room should be regulated to a temperature of 70-80°F (21-26 °C) and room humidity at 65-75% to achieve a VPD of about 0.8-1.0 kPa.

Spraying the VPDome™ with a sanitizing agent such as Athena® Reset at 1 oz per gallon (8 mL per L) should be done before every cycle of clones.

### ROOM CLIMATE

**CAUTION: THIS IS THE CLIMATE OUTSIDE OF THE VPDOME. NOT INSIDE THE VPDOME.**

TEMP	HUMIDITY	VPD
70-80°F (21 - 26 °C)	65-75%	0.8-1.0 kPa



**CAUTION: IF NOT FILLING THE VPDOME WITH 16 TRAYS OF CLONES, OPTIMAL ENVIRONMENTAL CONDITIONS WILL NOT BE MET. A SMALL HUMIDIFIER CAN BE PLACED INSIDE TO MAKE UP THAT DIFFERENCE.**

Athena® VPDome™

**WARNING: ONLY USE LED CLONE LIGHTS. NOT COMPATIBLE WITH HEAT-EMITTING LIGHT SUCH AS T5 FLUORESCENT.**

## Procedure

<b>1 Fill</b>	<p>Fill the shelving with freshly plugged trays of clones and close the magnetic doors. This is day 1.</p> <p><b>NOTE:</b> Clones placed on the higher shelves of the VPDome™ would be at an advantage environmentally due to humidity/heat rising.</p>
<b>2 Leave</b>	<p>On Day 2, the VPDome™ can be left closed all day to develop the proper humidity levels.</p>
<b>3 Ventilate</b>	<p>Day 3 and forward, burping is done for 5 to 20 minutes to ventilate the VPDome™ by leaving the magnetic doors half open with only the lower magnetic strips attached. Research has shown clones remain healthy even when leaving doors open as long as 4 hours.</p> <p><b>NOTE:</b> Colder environments outside the VPDome™ may create much higher levels of condensation so burping twice a day would be needed.</p> <p><b>NOTE:</b> Wipe the condensation completely off the doors if there is pest or pathogen pressure within the facility.</p>
<b>4 Inspect</b>	<p>The clones should be inspected every day for nutrient health and root development.</p> <p><b>NOTE:</b> If the clone trays were pre-soaked sufficiently, the clones should be fed again on Days 5, 7, 9, and 11 maintaining a 30-35% dryback.</p>
<b>5 Hardening</b>	<p>In days 10-15, the clones should be hardened off so the magnetic doors can be left completely open and strapped back against the sides.</p> <p><b>NOTE:</b> Before folding the doors into thirds, spray and wipe with a solution of Athena® Reset at 1 oz per gallon (8 mL per L) of water to prevent growth of pathogens.</p>

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