



POWER[®] CLONER

INSTRUCTIONS 45, 77, & 180

Botanicare® Power Cloners™ have been redesigned and improved to provide growers consistent, reliable production. Redeveloped with New Botanicare® low profile reservoirs, these systems decrease propagation time and now include these new features and benefits:

- Unique Botanicare® Cord Guide designed to block sprayed solution & improve cord management
- Drainage grid with a recessed pump
- An Internally Seated Tray
- Humidome™ options
- Customizable points for installation of spouts and fittings
- Dense Neoprenes
- Botanicare® Ceramic Airstones with Air Pump
- Water Volume Indicator

POWER CLONER 45



WHITE

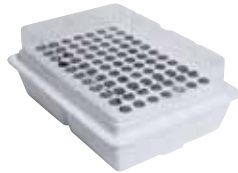
INCLUDES- 10 gallon reservoir, Humidome™, Recessed cord guide, High pressure sprayers, 1 Ceramic airstone, Power Clone™ Solution, AquaShield®, ZHO™



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INCLUDES- 10 gallon reservoir, Recessed cord guide, High pressure sprayers, 1 Ceramic airstone, Power Clone™ Solution, AquaShield®

POWER CLONER 77



WHITE

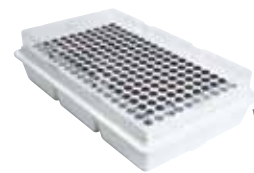
INCLUDES- 20 gallon reservoir, Humidome™, Recessed cord guide, High pressure sprayers, 2 Ceramic airstones, Power Clone™ Solution, AquaShield®, ZHO™



BLACK

INCLUDES- 20 gallon reservoir, Recessed cord guide, High pressure sprayers, 2 Ceramic airstones, Power Clone™ Solution, AquaShield®

POWER CLONER 180



WHITE

INCLUDES- 40 gallon reservoir, Humidome™, Recessed cord guide, High pressure sprayers, 2 Ceramic airstones, Power Clone™ Solution, AquaShield®, ZHO™



BLACK

INCLUDES- 40 gallon reservoir, Recessed cord guide, High pressure sprayers, 2 Ceramic airstones, Power Clone™ Solution, AquaShield®

**Congratulations on your Botanicare® Power Cloner purchase.
Please use the following instructions to assemble your Power Cloner.**

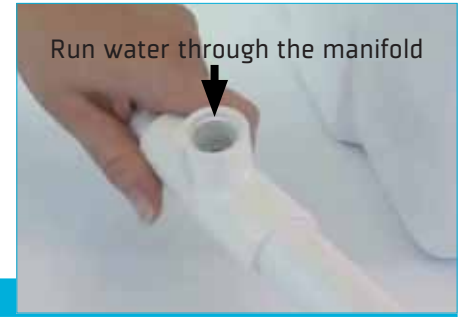
1. Remove and inspect all pieces from packaging and use the component list to verify that all necessary parts are present and undamaged.

 <p>*Power Cloner 45 White Shown</p>				 <p>ZHO™ comes with white PC only</p>																														
Reservoir & Clone Tray	Humidome™ (white only)	Manifold	Clear Tubing	Botanicare Products																														
																																		
<table border="1"> <tbody> <tr> <td>PC 45</td> <td>Mag Drive 250 Pump</td> </tr> <tr> <td>PC 77</td> <td>Mag Drive 350 Pump</td> </tr> <tr> <td>PC 180</td> <td>Mag Drive 500 Pump</td> </tr> </tbody> </table>	PC 45	Mag Drive 250 Pump	PC 77	Mag Drive 350 Pump	PC 180	Mag Drive 500 Pump	<table border="1"> <tbody> <tr> <td>PC 45</td> <td>200 Single Air Pump</td> </tr> <tr> <td>PC 77</td> <td>400 Dual Air Pump</td> </tr> <tr> <td>PC 180</td> <td>400 Dual Air Pump</td> </tr> </tbody> </table>	PC 45	200 Single Air Pump	PC 77	400 Dual Air Pump	PC 180	400 Dual Air Pump	<table border="1"> <tbody> <tr> <td>PC 45</td> <td>13 Yellow Sprayers</td> </tr> <tr> <td>PC 77</td> <td>15 Yellow Sprayers</td> </tr> <tr> <td>PC 180</td> <td>35 Yellow Sprayers</td> </tr> </tbody> </table>	PC 45	13 Yellow Sprayers	PC 77	15 Yellow Sprayers	PC 180	35 Yellow Sprayers	<table border="1"> <tbody> <tr> <td>PC 45</td> <td>45 Neoprene Inserts</td> </tr> <tr> <td>PC 77</td> <td>77 Neoprene Inserts</td> </tr> <tr> <td>PC 180</td> <td>180 Neoprene Inserts</td> </tr> </tbody> </table>	PC 45	45 Neoprene Inserts	PC 77	77 Neoprene Inserts	PC 180	180 Neoprene Inserts	<table border="1"> <tbody> <tr> <td>PC 45</td> <td>1 Air Stone</td> </tr> <tr> <td>PC 77</td> <td>2 Air Stones</td> </tr> <tr> <td>PC 180</td> <td>2 Air Stones</td> </tr> </tbody> </table>	PC 45	1 Air Stone	PC 77	2 Air Stones	PC 180	2 Air Stones
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Mag Drive Pump	Air Pump	Wrench & Micro Sprayers	5/8" Neoprene Insert	Botanicare Air Stones																														

2. Rinse Power Cloner parts

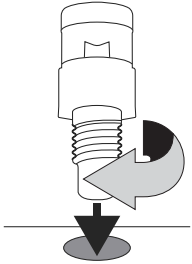
Make sure your Cloner is clean and debris free before using. This can be done by rinsing all components prior to use. Key items to rinse: Reservoir, Lid, and Manifold.

*Note: Make sure manifold is cleaned thoroughly.



3. Install the Sprayers

- a** Gently thread a sprayer into each site on the manifold. Hand tighten the sprayers.



- b** Use the yellow hole punch/wrench to tighten the sprayers until snug. Make sure arrows are pointed away from reservoir wall. Do not over-tighten as this can strip the threads.

*Note: Sprayer adjustment may be needed to ensure all sites receive adequate spray.



4. Connect the pump to the manifold

a Make sure there is Teflon tape on the pump threads.



4a

b Slowly thread the pump into the manifold.



4b

c Hand tighten gently, turning clockwise, until the pump is snug and lines up with the short end of the manifold.



4c

5. Install the manifold

- a Place the manifold into the reservoir so the pump sits in the recessed area.
- b Make sure the filter faces away from the cord guide.
- c Push down firmly to seat the manifold in the reservoir.

5a



6. Install the air pump & airstones

- a Power Cloner 77/180 only- Cut vinyl tube in half.
Power Cloner 45- Do not cut vinyl tube. It is already trimmed to the correct length.
- b Power Cloner 45- Attach one airstone to one end of the tube and the air pump to the other end.
Power Cloner 77/180- Repeat for the second airstone.

6b

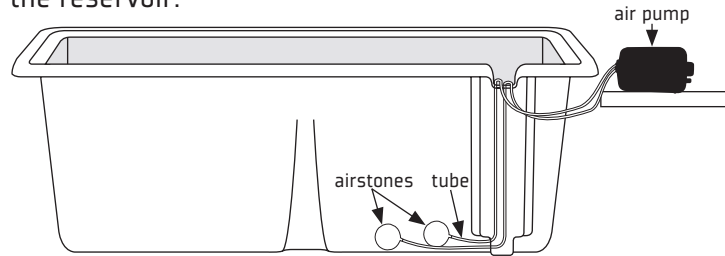


6b



Power Cloner 77/180 Pump Shown

- c Place the air pump on a stable surface outside the reservoir. Air pump should be placed above level of solution to prevent back siphon if power fails. Place one airstone on either side of the pump in the reservoir.



- d Slide the cord guide cover into place adjusting the power cords, and air lines to allow the cover to insert fully into position.
- *Note: Make sure the water level marks are in the appropriate position.

7. Finish the assembly

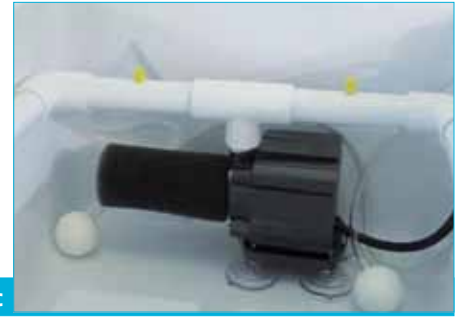
- a Insert 1 neoprene into each hole in the clone tray.
- b Place the tray onto the reservoir.

8. **Move the unit to desired location, and fill reservoir to 1" above the pump housing.** Note: Never plug in water pump unless fully submerged under water.

9. **Place clone tray on top of reservoir.**

10. **At this time your Power Cloner is assembled and ready to use.**

6c



6d



7a



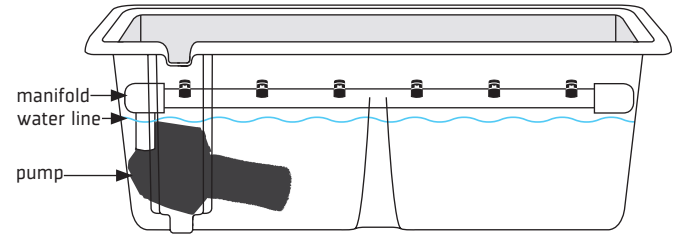
How to clone with your Power Cloner

What you'll need:

- Healthy Plant
- Cloning Solution (Botanicare® Power Clone Solution provided)
- pH meter
- pH adjuster
- Scalpel or shears
- Purified water

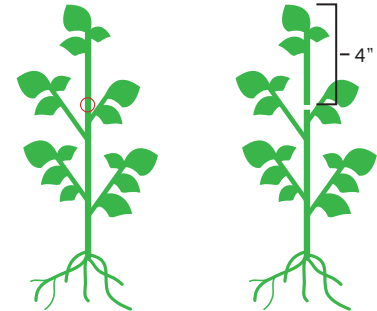
1. Prepare reservoir

- Fill reservoir with water above pump but below manifold.
- Add rooting solution (Power Clone Solution @ 30 ml/gal) stir.
- Add AquaShield (optional) 10 ml/gal stir.
- Test pH of solution. Ideal pH is 5.8-6.3.
- Adjust up or down using pH adjuster and retest.

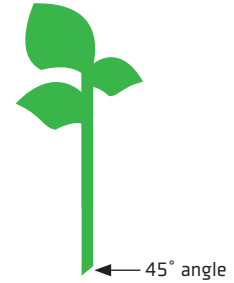


2. Take a cutting.

- Take cuttings from top half of plant where the most growth occurs.
- Locate a shoot that branches off the main stem and a primary leaf (an internode).
- Cut as close to the internode as possible. This allows your plant to heal faster.
- Make sure your cutting is at least 4 inches long to allow 1 inch to sit below the neoprene collar and 2 inches above.

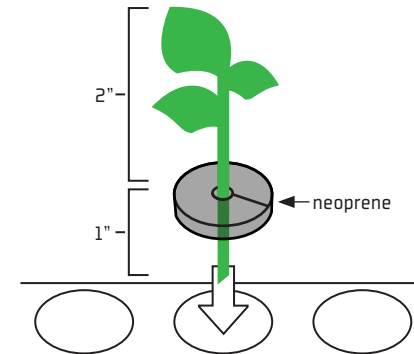


- Remove excess foliage from your cuttings to help reduce wilting from transpiration and direct the plants energy to root development.
- Trim the stem of the cutting at a 45 degree angle to increase surface area for rooting.
- If taking multiple cuttings, store the cuttings in purified water until ready to transplant into your Power Cloner.



3. Place cuttings in Power Cloner

- Gently place your cuttings into the neoprene collars. Make sure 1 inch of the cutting sits below the collar and 2 inches above.
- Place the neoprene into the Power Cloner lid holes.
- If your Power Cloner comes with a Humidome, place it on top of the lid.
- Turn on your Power Cloner and allow to run continuously for 5-7 days.
- Ensure the water temperature does not rise above 75 degrees. (Maintaining an ambient room temperature of 72-76 degrees can help keep water temperature under control.)
- Use a low intensity fluorescent light if ambient light is insufficient.
- Your clones should be rooted and ready to transplant in 5-7 days.



ZHO®

rhizosphere root inoculant



ZHO is a unique, proprietary blend of mycorrhizae and trichoderma fungi that builds a natural microbial system in and around plant roots which greatly improves plant and root growth, vigor, and production naturally.

Unlike other rhizosphere inoculants ZHO contains special amino acids designed to intensify the rhizobial activity that ZHO ignites.

Benefits:

- Improves rooting.
- Improves soil structure.
- Increases nutrient uptake.
- Increases root mass.
- Water Soluble.

Usage:

- Seedlings.
- Transplanting in coco, soil and hydroponic applications.



Light Hours	18	18	18	12	12	12	12	12	12	12	12	12
Plant Phase	Clones / Seedlings	Vegetative		Transition	Early Bloom		Mid Bloom		Late Bloom			Pre-Harvest
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	4-5 Days
ZHO	Rooted Plants 1/2 gm / plant	0	0	Rooted Plants 1/2 gm / plant	0	0	0	0	0	0	0	0

Mix 1/2 gram/plant with a small amount of water and apply to soil around plant. Refer to product label for application instructions.

AQUASHIELD®

liquid compost solution



AquaShield can be used throughout a plants life cycle in soil gardens, and in hydrogardens to create a natural and beneficial growing environment. AquaShield will assist in strengthening your clones' root masses and offers the best chance of survival when transplanting. AquaShield also helps mature plants to maintain a healthy root zone for optimum plant performance.

Benefits:

- Assists in strengthening your clones' root masses.
- Increases transplant survival rates.
- Assists mature plants in maintaining a healthy root zone.
- Keeps roots white, crisp, and shiny.

Usage:

- Hydroponic systems Aeroponics, Ebb & Flow, DWC, Top Feed Drip.
- Soil Gardens.
- All plant types.



All dosages in milliliters per gallon [4 L] of water

Light Hours	18	18	18	12	12	12	12	12	12	12	12	12
Plant Phase	Clones / Seedlings	Vegetative		Transition	Early Bloom		Mid Bloom		Late Bloom			Pre-Harvest
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	4-5 Days
AquaShield	5	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15	10	10	0	0

PURE BLEND PRO™ GROW 3-2-4

natural and organic-based plant food

PLANT NUTRIENTS 



Benefits:

- Safe for all hydroponics methods and substrates.
- 100% plant soluble organics for fast absorption.
- Essential elements are not derived from harmful chemicals such as urea and ammonia nitrate.
- Eliminates the plants exposure (and ultimately the consumer) to toxic heavy metals which can occur as contaminants in chemical fertilizers.
- The organic components of Pure Blend Pro enhance uptake and utilization of plant nutrients.
- Amplified Metabolic rate and capacity enables plants to produce fruits and vegetables with more minerals and vitamins.
- Increases budding, flowering, and fruiting capacity.

Usage:

- Fruits, flowers, vegetables, houseplants, shrubs, cacti, and succulents.
- Hydrogardens and Container gardens.
- Use with Liquid Karma, Pure Blend Pro Bloom, and Soil.



All dosages in milliliters per gallon [4 L] of water

Light Hours	18	18	18	12	12	12	12	12	12	12	12	12
Plant Phase in weeks	Veg 1	Veg 2	Veg 3	Bloom 1	Bloom 2	Bloom 3	Bloom 4	Bloom 5	Bloom 6	Bloom 7	Bloom 8	Pre-Harvest Flush (4-7 Days)
Advanced Formula:												
Pure Blend Pro Grow 3-2-4	15	18	20	0	0	0	0	0	0	0	0	0
Pure Blend Pro Bloom 2-3-5	0	0	0	25	25	27	30	30	30	25	20	0

*Note: Always mix fertilizer first followed by desired supplements. Suggested dosages may not apply to all plant types If multiple supplements are desired reduce fertilizer by 10-25%.

CAL-MAG PLUS™ 2-0-0

calcium, magnesium & iron supplement

PLANT SUPPLEMENTS 



Cal-Mag Plus prevents blossom end rot in plants such as tomatoes and peppers and tip burn in lettuce by acting as a catalyst for major elements to work in symbiosis with one another.

Benefits:

- Prevents blossom end rot in tomatoes and peppers and tip burn in lettuce and cabbage.
- Prevents dry and withered flower and fruit sets.
- Prevents interveinal chlorosis, stunted growth rates, and upward leaf curl.
- Increases cell division and plant tissue development.
- Increases flower and fruit sets.
- Increases water, nutrient, and carbon dioxide uptake.
- Increases growth rates and crop maturity.

Usage:

- For Hydroponics, soil, container gardens.
- Tomatoes, Peppers, Lettuce, fruit and flower bearing plants.
- Use with Botanicare® Nutrients or preferred nutrient program.
- Use with reverse osmosis water.
- Use with Botanicare's Cocorot™ Coir Fiber.



All dosages in milliliters per gallon [4 L] of water

Light Hours	18	18	18	12	12	12	12	12	12	12	12	12
Plant Phase	Clones / Seedlings	Vegetative		Transition	Early Bloom		Mid Bloom		Late Bloom			Pre-Harvest
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	4-5 Days
CAL-MAG PLUS 2-0-0	3	3	5	5	5	5	4	4	3	3	3	0

*When growing with reverse osmosis water or in coco media use a minimum of 5 ml of Cal-Mag Plus during the first 2 weeks.

FULVEX™

trace mineral extract

PLANT SUPPLEMENTS



Fulvex is an all natural liquid extract that combines concentrated amounts of fulvic acid, magnesium sulfate (a known plant catalyst), and a blend of over 72 trace minerals. Fulvex is beneficial for both hydroponic and soil applications. This blend is designed to work with a grower's existing nutrient feed formula to enhance nutrient availability and increase mineral uptake.

Benefits:

Natural Chelator – Attracts, holds, and carries nutrients to plants metabolic sites.

Mixes With All Fertilizers – Reacts with both organic and inorganic compounds at high or low pH levels.

Increases Seedling Success Rates – Decreases seed germination time, initiates root hair growth, and promotes root development.

Releases Minerals – Solubilizes substantial amounts of immobile minerals and can enter into complex bonds with various dissolved minerals.

Promotes Higher Crop Yields – Increased absorption of minerals increases overall growth rates, improves shoot and flower set development, and strengthens stem and crop cell walls.

Corrects Deficiencies – Allows minerals to be easily absorbed into plants vascular system to quickly correct localized deficiencies.

Protects Plants From Stresses – Aids in the relief of oxygen deficiencies, which increases the resistance to drought and other environmental stresses.

Stimulates Antibiotic Protection – Enhances the uptake and translocation of antibiotics in plants produced during the decomposition of plant residues commonly found in compost teas.

Reduces Wilting – Helps plants accumulate soluble sugar which increases osmotic pressure in the cell walls and enables them to withstand wilting.

Application rates:

Hydroponics – 5–10ml/gal

Foliar Spray – 15–30ml/gal when used alone or in conjunction with a well balanced nutrient

