

# ESS ELECTROSTATIC GREENHOUSE SPRAYERS

Part of the powerful line of sprayers from Electrostatic Spraying Systems, Inc.

Electrostatically charged pesticide droplets are attracted to the plant. These electrical forces are **75 times stronger than gravity**. Pesticide covers all parts of the plant, including the undersides of leaves where most insects live and feed. **No other spraying** system has this patented air-assisted electrostatic technology.

#### Electrostatic Spraying Systems, Inc.



#### **J-PTO SERIES**

## J-1 & J-2 attach to a tractor 3-point hitch and are powered by a PTO

**J-1:** One MaxCharge electrostatic spray gun and one reel with hose capacity up to 250 ft.

J-2: The same features as J-1, except equipped with two MaxCharge electrostatic spray guns and two hose reels, each with hose capacity up to 250 ft.

#### **Technical Specifications**

Airline Pressure 65 psi

Drop Size 40 micron VMD
Air Volume 20 CFM
Spray Range Up to 20 ft
Tank Pressure 12 - 15 psi
Flow Rate 4 gal/hr

Tank 15 gal Hose Up to 250 ft



### GPS-5K (Gasoline) EPS-5K (Electric)

## Larger commercial greenhouse growers

**GPS-5K:** 5 hp. gasoline engine **EPS-5K:** 220 volt, 3 hp electric motor

- MaxCharge electrostatic spray gun
- $\bullet$  Spray up to 40,000 sq. ft. per hour
- Can be pulled by hand or attached to a small vehicle

#### **Technical Specifications**

Tank 5 gal

Size 40"H x 22"W x 42"L

Weight 230 lbs
Air Line Pressure 50 psi
Tank Pressure 12 - 15 psi
Flow Rate 4 gal/hr

Drop Size 40 micron VMD
Spray Range Up to 25 ft
Hose Up to 250 ft



#### TRG

#### For connection to existing air supply

- MaxCharge electrostatic spray gun
- Oversized, semi-pneumatic tires
- Stainless steel tank
- Tank agitator assures mixing of all chemicals

#### **Technical Specifications**

Tank 5 gal

Size 31"H x 21"W x 36"L

Weight (full) 120 lbs
Air Line Pressure 60-70 psi
Tank Pressure 10 psi
Air volume 12 CFM
Flow rate 4 gal/hr

Drop Size 40 micron VMD
Spray Range up to 25 ft
Hose Up to 250 ft

#### XT

## Smaller growers, interior scapes, retail areas

- MaxCharge electrostatic spray gun
- Compatible with all conventional chemicals and fungicides
- Main tank holds enough mix for one hour of spraying
- One liter auxiliary tank for easy spot spraying

#### **Technical Specifications**

Tank 3 gal

Size 42"H x 18"W x 24"L

Weight 105 lbs
Air Line Pressure 30 psi
Tank Pressure 12-15 psi
Flow rate 2 gal/hr

Drop Size 40 micron VMD
Spray Range up to 12 ft
Hose 50 ft



**BP-2.5** (2.5 gal) **BP-4** (4 gal)

## For connection to an existing air supply

- MaxCharge electrostatic spray gun
- PVC tank with UV inhibitor
- Padded nylon straps

#### **Technical Specifications**

Tank 4 or 2.5 gal Weight (empty) 7 lbs

Weight (full) 42 lbs (4 gal)
Air Volume 8.5-10 CFM
Tank Pressure 12 - 15 psi
Flow Rate 4 gal/hr

Drop Size 40 micron VMD Spray Range Up to 25 ft Hose 100 ft standard



The products of ESS are the result of the efforts and creativity of many people. In addition to input from engineering, marketing and manufacturing personnel, suggestions from growers have been implemented in the designing of our equipment. We would like to hear your ideas, too! If you have any suggestions or comments regarding the products or services of ESS, write or call us at:

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#### **ELECTROSTATIC SPRAYING**

#### **Electrostatic Concept**

ESS air-assisted electrostatic sprayers provide a much more effective use of chemicals and are proven to work extremely well in combating insects and disease while reducing waste.

The droplet size of 40 microns has been scientifically proven to maximize biological activity of pesticides as well as increase the coverage area. ESS spray droplets are electrostatically charged, making them attract to the plant. Air turbulence in the canopy assures that the spray will reach the hidden areas. The charged droplets delivered by air go deep into the inner regions of the plant and deposit on all plant surfaces, including the undersides of leaves and the back side of stems.



Hydraulic spray on leaf underside. Average count in 54 samples = 6.3 deposits in 1/8 in<sup>2</sup>



Charged air-assisted spray on leaf underside. Average count in 54 samples = 425 deposits in 1/8 in<sup>2</sup>

#### Low Volume - High Yield

With an ESS system, growers can typically reduce chemical usage by 30-60%. Growers can achieve excellent results from low-toxicity chemicals. ESS sprayers use less water to dispense a given amount of chemicals. You do not need to spray to runoff. Growers use from 1-3 gallons of water per 10,000 sq. feet compared to a traditional hydraulic sprayer that uses 25-75 gallons for the same area. After spraying with an ESS sprayer, plants are dry with no visible residue on leaves and no runoff.



Air-assisted electrostatically charged spray is highly attracted to and literally wraps around this rod. The force attracting the charge is 75 times that of gravity.

#### Coverage that Defies Gravity

Electrostatically charged spray means that the pesticide droplets are attracted to the plant. The electrical attraction is 75 times stronger than gravity. Pesticide covers all parts of the plant including the undersides of leaves where most insects live and feed.

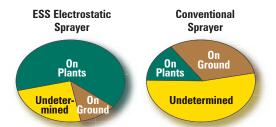
Growers have a powerful new weapon in their pest control arsenal. Air-assisted electrostatic sprayers significantly improve the results of less toxic, more environmentally safe chemicals. Pesticides are a necessity, but some can cause serious environmental and worker safety problems. A large portion of the environmental impact is due to overuse and off-target movement of toxic pesticides resulting from inefficient spray application.

#### Greater power for weaker chemicals

Growers are now faced with reducing their dependency on highly toxic pesticide materials. There is increased pressure to reduce runoff, pesticide overuse and worker exposure. The growing number of environmentally safe pesticide compounds available to growers are often weaker and very expensive.



Air-assisted electrostatically charged spray defies gravity and wraps around leaves and stems, places that chemicals dispensed from hydraulic sprayers will never reach.



Where do you choose to put your chemicals?

Air-atomizing electrostatic sprayers make environmentally "soft" pesticides economically feasible by overcoming the deficiencies of conventional sprayers. Air-delivery greatly reduces drifting and increases spray penetration. Turbulence within the plant canopy helps the spray reach hidden areas. Electrostatic charging increases spray distribution for better insect and disease control while reducing waste and the amount of chemicals being used.

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