KNIGHT

IDEX

IDEX CORPORATION

Stratus Pro™ Electrostatic Sprayer Instruction Manual

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SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

WARNING - When using the Stratus Pro™, basic precautions should always be followed, including the following:

(a) Read all the instructions in this manual before using the Stratus Pro™.

(b) To reduce the risk of injury, close supervision is necessary when the Stratus Pro™ is used near children.

(c) Do not contact moving parts.

(d) Only use attachments recommended or sold by Knight.

(e) Do not use outdoors. For indoor commercial use only.

(f) The following shall be adhered to by the user:

-- To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.

-- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

-- Unplug from outlet when not in use and before servicing or cleaning.

-- Do not operate the Stratus Pro™ with a damaged cord or plug, or after the appliance malfunctions or is dropped or damaged in any manner. Return the appliance to Knight for examination, repair, or electrical or mechanical adjustment.

(g) To reduce the risk of electrical shock, do not put nozzle in water or other liquid. Do not place or store appliance where it can fall or be pulled into a tub or sink.

(h) Connect to a properly grounded outlet only. See grounding instructions below.

(i) Do not use below garage floor or grade level.

GROUNDING INSTRUCTIONS

This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER – Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the appliance is properly grounded. Do not modify the plug provided with the appliance – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

DANGER – A qualified electrician should be consulted if there is any doubt as to whether an outlet box is properly grounded.

GENERAL SAFETY

WARNING: Do not touch the tip of the sprayer when in use.

CAUTION: Wear protective clothing and eyewear when dispensing chemicals or other materials. Observe safety handling instructions (SDS) of chemical mfrs.

CAUTION: To avoid severe or fatal shock, always disconnect main power when servicing the unit.

CAUTION: When installing any equipment, ensure that all national and local safety, electrical, and plumbing codes are met.

INTRODUCTION

Electrostatic spraying is a preferred method of application as the solution wraps around objects to surfaces out of the direct line of spray. This assures better coverage even to uneven surfaces. Also, due to the droplets having the same charge, the droplets repel each other rather than clumping together as they exit the spray nozzle. This assures an even coating across surfaces to maximize coverage and contact.

Knight's Stratus Pro™ is a rapid coverage spray system offering electrostatic spray as a feature that can be enabled or disabled to comply with the requirements of the product you are using. The Stratus Pro™ produces a spray mist that evenly coats surfaces at a rapid pace allowing for quick, easy coverage of large surface areas.

APPLICATIONS

Healthcare: Bedrails, door handles, hallway railings, walkers, bathroom surfaces, chair surfaces, etc.
Schools: Desktops, chairs, door handles, lockers, restroom surfaces, water fountains, cafeteria tables, etc.
Fitness Centers: All equipment, doors, desk, restrooms, etc.
Airports: Chairs, scanners, desks, kiosks, restrooms, escalators/elevators etc.
Hotels: Door handles, lobby area, breakfast area, tables, remote controls, chairs, curtains, bathrooms, etc.
Veterinary Practice / Kennels: Cages, kennels, stables, crates, tables, etc.

SPECIFICATIONS

- Flow Rate: 4.0 oz/min (+/- 0.2 oz).
- Spray Distance: 3 – 5 feet (apex of cone).
- Spray Width: 1 – 2 feet.
- Droplet Size: 43.4 to 57.3 microns VMD (depending on distance from spray nozzle).
- Sprayer features electrostatic electrode at end of nozzle giving spray solution an electrical charge which will encourage the spray to wrap around objects out of the direct spray path for better coverage.
- Operating Air Pressure: 24 psi (+/- 3 psi).
- Available Spray Time: 90minutes (full tank).
- Hose: 10 feet. A reinforced outer hose containing within a separate air hose, electrical wires required for electrostatic module and a chemical supply line running together (possibly wrapped together) to the sprayer.
- Electrical: 115 VAC (USA applications), 50 foot cord.
- Circuit breaker at back of unit for electrical feed (15A).
- Switch to disengage electrostatic feature yet allow sprayer to work otherwise.
- For indoor commercial use only.
- (Pending) The Knight Stratus Pro™ meets Underwriters Laboratories published and nationally recognized standards for safety.

REQUIREMENTS

- 115 VAC main power source.
- Chemical requirement: The Stratus Pro™ is designed to use diluted chemical. The use of a proportioner is recommended for easy, accurate dilution of concentrates. Follow all use directions and precautions on the product label and SDS.

ADDITIONAL SAFETY PRECAUTIONS

- Read and understand the SDS sheets for the cleaning chemicals that will be used — consult your chemical supplier if you have any questions.
- Always wear PPE. Safety goggles, cloth face mask and gloves are recommended. Refer to product label for cautions and appropriate PPE.
- Follow recommended dilution, application instructions, and precautions listed on chemical product label used.
- Avoid contact of cleaning agents with skin and eyes. If contact occurs, refer to SDS sheet for proper attention.
- Do not use flammable chemicals with sprayer.
- Drain fluid contents from unit and flush out tank if using different types of chemicals from one operation to the next.
- Never point the spray nozzle at anyone.
- Never leave unit unattended while discharge hose is under pressure.
- Never spray directly into an uncovered electrical outlet or electrical panel.
- Avoid breathing direct spray mist.

INITIAL SETUP

The handle for the unit is provided in the shipping carton and requires installation in the field before use.

(1) [Fig. A] Attach handle to the back of the cart with the two screws and lock-washers provided.

Figure A

(2) [Fig. B] The power cord is attached to a receptacle on the back of the cart. Ensure that the cord is plugged in firmly to the receptacle and did not get pulled loose during removal of unit from the shipping carton.

Figure B

OPERATION

(1) [Fig. C] Remove lid to solution tank and fill with diluted chemical — consult your product label or chemical supplier for proper dilutions. Solution tank holds 2.8 gallons — Do not overfill tank.

(2) Move cart to the desired work area. Press down the brake lever on both rear casters to secure cart in place. Press the brake release on the casters when ready to move cart.

CAUTION: Do not move the cart by pulling on the sprayer hose or the power cord. Do not lift the unit or pull it up a staircase by the handle.

Figure C

(3) [Fig. D] Plug power cord into a suitable power source.

WARNING: See page 2 for important safety instructions and proper grounding practices.

Figure D

(4) [Fig. E] Turn main power switch on base unit ON.

Figure E

(5) [Fig. F & G] Press green rocker switch on spray nozzle to the ON position, then hold down PRIME button for about 25 seconds to prime the fluid pump. If the spray pattern is choppy or uneven, continue priming for about 10 seconds longer until the spray begins to flow smoothly.

NOTE: Point the spray nozzle into an open area while priming to avoid wetting an unintended surface.

WARNING: Do not touch the tip of the sprayer when in use.

Figure F

Figure G

(6) [Fig. H] Point nozzle toward surface to be sprayed and slowly move nozzle in a back and forth motion until the surface is satisfactorily covered with an even coating. Use a clean cloth to wipe excess chemical deposits that may buildup on the sprayer gun due to blowback during operation.

NOTE: For complete wrapping coverage of the sprayed solution, press the CHARGE button on the back panel to the ON position [Fig I]. Unit can be operated with charge feature off if wrapping is not needed, for example a large flat surface.

Figure H

Figure I

(7) [Fig. F] Turn sprayer off by pressing rocker switch on spray nozzle to OFF position.

AFTER-USE

(1) [Fig. J] Empty tank by opening the drain valve at rear of unit to allow contents to exit tank into an appropriate drain.

(2) Rinse the tank with fresh water thoroughly while drain valve remains open.

(3) [Fig. J] Close drain valve and add enough water to fill approximately 1 inch within the tank.

(4) Plug electrical cord into a nearby outlet. Turn main power on. Point gun nozzle into the open tank and press and hold the Prime button as a stream of water will flow through nozzle and into tank flushing any contents from the internal components and lines leading to nozzle gun. Repeat step 1 to empty tank.

(5) [Fig. K] Wrap the power cord around the holder on the back of the cart for transporting to a different location.

CAUTION: Do not move the cart by pulling on the sprayer hose or the power cord. Do not lift the unit or pull it up a staircase by the handle.

(6) [Fig. L] Hang the sprayer on the hook provided on the handle.

Figure J

Figure K

Figure L

MAINTENANCE

- Periodically check the electric pump for leaks or evidence of wear/breakdown.
- Periodically check the hose connections to main unit and to nozzle to assure they are tight.
- Clean and/or replace air filter on air compressor annually.
- Check filter strainer inside tank and clean off any debris as needed.

TROUBLESHOOTING

Problem	Solution
(1) Unit will not operate.	Check breaker reset switch on base unit. Check for loose wire connections. Check for blockage on pump discharge line. Check power source to ensure it is live.
(2) Unit will not spray.	Make sure there is product in the solution tank. Check air filter on compressor for blockage. Replace if necessary. Check if air compressor is operational. Check for air leaks between compressor and nozzle.
(3) Pump cycles but no liquid is discharged.	Check to see if pump is primed. Suction line leak. Pump fittings loose or broken. Remove pump head. Flush with water and re-assemble. Clogged filter strainer in tank.

REPLACEMENT PARTS

Part Number	Description	Qty
2000839	Power cord	1
9600987	Power switch boot	1
1800632	Bumpers	4
7649345	Front casters	2
7649344	Rear casters (lockable)	2
7455106	Cart handle	1
1901174	Hand grip (for handle)	1
7455006-1	Spray nozzle	1
0600885	Nozzle checkvalves	2
0800382	Nylon braided tubing	Various
7020165	Hose clamps	Various
1601064	Air compressor	1
1600136-01	EDP pump	1
1600807	EDP elbow fittings	2
2000841	Cooling fan	1
7455011	DIN rail assembly	1
7455001	Spray gun assy	1
9600854	3-way solenoid	1
1800993	Tank/cap	1

MOBILE CART & SPRAYER

1.) SOLUTION PRIME SWITCH
2.) ELECTROSTATIC ON/OFF
3.) CIRCUIT BREAKER
4.) MAIN POWER SWITCH
5) ELECTRIC DIAPHRAGM PUMP
6.) SOLUTION TANK
7.) FILTER—AIR COMPRESSOR
8.) AIR COMPRESSOR
9.) DRAIN VALVE
10.) ON/OFF SWITCH—NOZZLE

CART & HANDLE

1.) **CART**

2.) **HANDLE**

3.) **LOCKABLE CASTERS**

- Shipping weight: 110 lbs (49.9 kg)
- Weight with full tank: TBD

DISCLAIMER

Knight LLC does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as “O” rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

FOOTNOTE

The information and specifications included in this publication were in effect at the time of approval for printing. Knight LLC reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatsoever.

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