

## Owner's Manual

You have just purchased one of the best spray washers on the market today. It incorporates the very latest in technological advances. To assure you the best and safest performance as well as longest equipment life, please read the enclosed information.

After reading the material in this manual, should you have a service problem or need help, please call our toll free number **1-800-548-3373** or **(479) 636-5776**.

**TERMS:** All parts will be shipped with check in advance or C.O.D. Commercial accounts are allowed 15 day terms from date on invoice with approved credit.

**FREIGHT:** All freight will be paid by the customer. Special consideration will be given to items under warranty coverage.

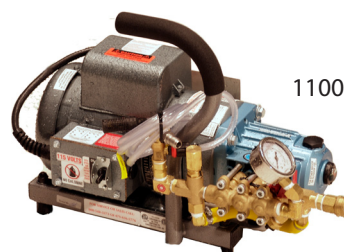
**SERVICE:** If a problem occurs, please refer to the "Diagnostic and Maintenance Chart" in the Express Service Manual. Also, refer to the Cat Pumps Service Manual. If the problem is not resolved, then please call our toll free customer service number **1-800-548-3373** or **1-479-636-5776**.



600PE



1100PE



1100HC

**Date Manufactured:**

\_\_\_\_/\_\_\_\_/\_\_\_\_

600PE \_

1100PE

1100HC

## IMPORTANT DOCUMENT - DO NOT DISCARD

Serial Number:

Date Shipped:

**NOTE:** Specifications found in this manual subject to change without notice.  
**FOR COMMERCIAL USE ONLY**

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# Service Requirements

**Water:** 4-5 gallons/minute @ 30psi minimum recommended operating temperature, cold-120° F.

**Electric:** All models except INTERNATIONAL: 115 Volt/15 Amp individual branch circuit.

• **INTERNATIONAL:** See serial plate on machine.

# Model Identification & Specifications

The complete model number located on the serial number label identifies the series, type and operating specifications of the system.

Model #	SMT 600	PE	Y	36	50	05	0850
Series	-600						
	-1100						
Type	-PE = Portable Electric						
	-HC= Hand Carry						
Chemical Injection	Y = Before Pump						
	X = After Pump						
Pump Flow Rate (gallons per minute)	22 = 2.2 GPM						
	29 = 2.9 GPM						
Motor Horsepower	20 = 2 HP Motor						
	50 = 5 HP Motor						
Nozzle Size	05 = #5 Nozzle						
	75 = #7.5 Nozzle						
	08 = #8 Nozzle						
Max Operating Pressure	850 = 850 PSI						
	1100 = 1100 PSI						

## SMT WARRANTY – LIMITED Effective November 1, 2008

**PARTS** -SMT warrants parts for wall mounted and rack mounted 600 series and 2000 series machine to be free from defects in material or workmanship for a period of 2 years from the date of purchase from date of shipment from factory (if proof of purchase is missing) to the original purchaser excluding items listed below.

SMT warrants parts for all other machines, wall mounted 1100 series machines and all portable machines to be free from defects in material or workmanship for a period of 1 year from the date of purchase (from date of shipment from factory if proof of purchase is missing) to the original purchaser excluding items listed below. This warranty is limited to repairing or replacing products to the original purchaser, which manufacturer's investigation shows were defective at the time of shipment by the manufacturer. All products subject to this warranty shall be returned F.O.B. Spray Master Technologies - Rogers, Arkansas for examination, repair or replacement.

The warranty set forth herein is in lieu of all other warranties, expressed or implied, including without limitation any warranties of merchantability or fitness for a particular purpose and all such warranties are hereby disclaimed and excluded by the manufacturer. The manufacturer shall not be liable for any further loss, damages, or expenses, including incidental or consequential damages, directly or indirectly arising from the sale or use of this product.

**ITEMS VOIDING WARRANTY**- This warranty is subject to the following conditions and limitations. The following voids all warranty claims on Spray Master Technologies products: Abuse, misuse, using excessive hot water temperatures - exceeding 120 degrees Fahrenheit (49 degrees Celsius), hard water conditions, using bleach as an injected chemical, failures caused by incorrect installation or failure to correctly wire the system at the electrical source.

**EXCLUDED ITEMS**- The following items are excluded: SPRAY GUNS, WANDS, HOSES, NOZZLES, HUMMER JET SR. & JR. CASTERS AND HANDLES. These items are covered by the above warranty for 90 days from the date of purchase for defects in materials or workmanship.

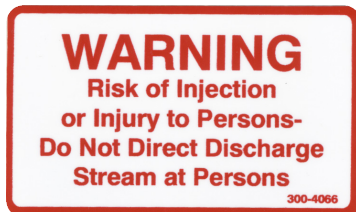
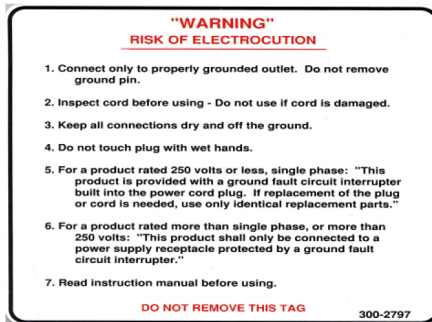
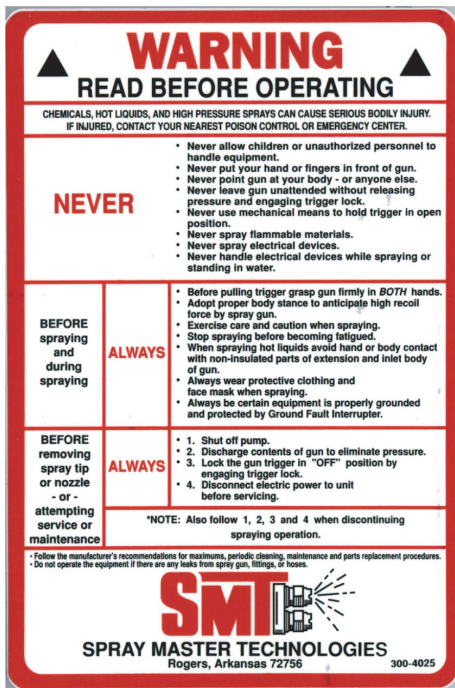
**LABOR** - to repair or replace defective components shall be covered for a period of 1 year from date of purchase (90 days on excluded items), proof of purchase is required.

[www.spraymastertech.com](http://www.spraymastertech.com)

Phone: 479.636.5776 • Fax: 479.636.3245 • 115 E. Linden • Rogers, Arkansas 72756 USA

## Warning Labels

These **"WARNING"** labels are affixed to your system for all operators to read. If they have been removed or are illegible, please call **1-800-548-3373** for replacement.



Note: Labels on this page are not to scale.

## Risk of Fire, Electric Shock or Personal Injury

### IMPORTANT SAFETY INSTRUCTIONS

**WARNING** - When using this product, basic precautions should always be followed, including the following:

- Read all the instructions before using the product.
- To reduce the risk of injury, close supervision is necessary when a product is used near children.
- Know how to stop the product and bleed pressures quickly. Be thoroughly familiar with the controls.
- STAY ALERT - watch what you are doing.
- DO NOT operate the product when fatigued or under the influence of alcohol or drugs.
- Keep operating area clear of all persons.
- DO NOT overreach or stand on unstable support. Keep good footing and balance at all times.
- Follow the maintenance instructions specified in the manual.
- NEVER look directly into a nozzle. Always release the pressure in the high pressure hose by opening the spray gun after machine is shut off.
- NEVER allow your unit to run at a pressure above its "maximum pressure while spraying" as documented in this manual for your model number.
- NEVER re-adjust the unloader valve if it has been set by the factory.
- NEVER turn the unloader adjusting nut whereby the unloader opening pressure exceeds 100 PSI above "maximum pressure while spraying."
- For a ground product rated 250 Volts, single phase or less:  
"This product is provided with a GFCI (Ground Fault Circuit Interrupter) built into the power cord plug. If replacement of the plug or cord is needed, use only identical replacement parts."

**WARNING - Risk of injection or injury -  
DO NOT directly discharge stream at persons.  
SAVE THESE INSTRUCTIONS**

## Receiving

**Damage:** Report any damage to the shipping carton or contents to the freight carrier. File a claim with the carrier within 10 days if damage is evident. The manufacturer is not responsible for damage to the equipment caused by the freight carrier.

**Package Contents:** Carefully check the contents of the shipping cartons to ensure the contents agree with the packing list. If items are missing or if you have any questions, please call our customer service department at **(800) 548-3373** or **(479) 636-5776**.

## Assembly

Some assembly is required on select SMT portable products.

**VENT CAP INSTALLATION:** All SMT products are shipped with a red vented oil fill cap that must be installed on the pump prior to the pump operation. Remove the black shipping cap on top of the pump and keep it for later use. Install the red vent cap snugly but do NOT over tighten.

**HANDLE INSTALLATION (1100-PE):** Assemble the handle to the lower frame using the hardware provided, by aligning the four holes in the handle assembly with the four holes in the base assembly. Assembly hardware is attached to the handle assembly for shipping.

## Returned Goods Policy

Any item returned for warranty consideration or for credit must have a **RETURN AUTHORIZATION NUMBER**. Call our Customer Service Department and discuss the nature of your request. Please note that all items returned must be returned F.O.B. Rogers, Arkansas. No collect or C.O.D. shipments will be accepted unless prior arrangements with our

Customer Service Department have been made. A restocking fee may be applied to items for credit that are not under warranty. To reach our Customer Service Department call **(800) 548-3373** or **(479) 636-5776**, or write to Spray Master Technologies®, 115 E. Linden St., Rogers, Arkansas 72756.

# Operating Instructions

## User Operated Controls

**SPRAY GUN:** The spray gun assembly is connected by quick-connect fittings to the output end of the high pressure hose. Operate the spray gun by squeezing the gun trigger while directing the hi-pressure spray toward the surface or object to be cleaned.

**DUAL NOZZLE SELECTOR:** The dual nozzle selector is located on the nozzle end of the spray gun and used to select either low or high pressure spray. Selection of the desired nozzle must be made while the spray gun trigger is released. To select the low pressure nozzle, rotate the spray gun 90° counter-clockwise so that the spray gun handle is parallel to the ground with the hose connection extending to the operator's right, then squeeze the spray gun trigger. To select the high-pressure nozzle, rotate the spray gun 90° clockwise so that the spray gun handle is parallel to the ground with the hose connection extending to the operator's left, then squeeze the spray gun trigger. Once the nozzle has been selected and the spray gun trigger held open, the spray gun can be rotated and aimed in any direction without affecting nozzle operations.

**VARI NOZZLE:** The vari nozzle is used to select low or high pressure, and to adjust the spray pattern. Selection of the high or low pressure is made by moving the black body of the nozzle toward or away from the gun handle. For the high pressure, pull the black nozzle-body firmly toward the spray gun handle. To select low pressure, push the black nozzle-body firmly away from the spray gun handle. The spray pattern can be varied from a fan spray to a zero degree stream. To vary the spray pattern at the nozzle, twist the black nozzle-body for the desired pattern.

**CHEMICAL METERING SELECTORS (600PE):** The Chemical Metering Selector is located on the stainless steel cover of the SMT 600 PE. This control allows the operator to select and meter a chemical to be injected into the low pressure spray. This control is also used to flush the chemical injector after each use. Selection and metering is done by turning the selector knob from OFF position counter clockwise. The further the control knob is turned, the higher the chemical concentration of the spray output. (See chemical dilution chart and instructions on page 6.) To flush the chemical injector, turn the metering knob fully clockwise and operate the gun and pump on low pressure for one minute.

**CHEMICAL METERING KNOB (1100PE/HC):** The chemical metering knob is located on the chemical injector and is used to adjust the chemical dilution rate. (See chemical dilution chart and instructions on page 6.)

**POWER ON/OFF:** The power on/off switch is used to turn the pump motor on and off. The power switch is located on the motor junction box cover plate of all models.

## Preliminary equipment check

- Check oil level to red dot on oil sight gauge on front of pump. Change initial fill after 50 hours running period. Thereafter, change oil every 3 months or 500 hour intervals.
- Check to ensure the GFCI power cord is in good condition. Do not operate this machine if the power cord or GFCI is damaged in any way.
- Check Hoses for breaks and damaged fittings.
- Check gun for damaged fittings, nozzles, and triggers.

## Preparation for use

- Move unit to an operating location that is level and firm.
- Connect high pressure hose to pump output.
- Connect spray gun to high-pressure hose.
- Connect water supply hose to water supply hose bib.
- Ensure on/off switch is set to "OFF"
- Plug GFCI power cord into individual branch circuit and press reset button on GFCI.

## Cleaning with the system

- Hold spray gun firmly.
- Direct spray gun away from individuals and equipment.
- **WARNING: Never spray any energized electrical equipment that is not rated for wet locations.**
- Set power ON/OFF switch to "ON"
- Direct spray gun toward the surface or equipment to be cleaned and squeeze trigger.
- Use low pressure to apply soap, high pressure to rinse.
- Apply soap to and thoroughly rinse the surface or equipment to be cleaned.
- When cleaning is complete, flush the chemical injector prior to shut off and storage.
- Set ON/OFF switch to OFF.
- Turn water supply off at hose bib.
- Disconnect GFCI power cord.
- Squeeze spray gun trigger to release pressure.
- Disconnect and store all equipment

## Accessories

The accessories listed below are available for use with your SMT Portable Pressure Cleaning Systems:

HUMMER JET JR- Surface cleaner (600, 1100)  
OPTIONAL LENGTH HIGH PRESSURE HOSES  
HEAVY DUTY HOT WATER SUPPLY HOSES  
TRAP SHOOTER – Drain cleaner (600, 1100)  
FLEXI-WAND (600, 1100)



# User Maintenance

## User Maintenance

**Oil:** Check oil level with machine in the “OFF” position. Add oil to the pump reservoir as necessary to keep the oil level at the center of the red dot on the oil-level sight glass. Use ISO 68, 30 weight non-detergent hydraulic oil only. Oil may be purchased from Spray Master Technologies.

**CHEMICAL FOOT SCREENS:** Flush the chemical foot screens and injector with warm water to remove chemical buildup that can restrict chemical flow. Remove the chemical pickup tube and foot-screen from the chemical supply and submerge it in warm water. Operate the unit on low-pressure for minutes with the chemical metering device for maximum chemical flow.

**HARD WATER DEPOSIT:** Flush the system with a de-liming agent, such as Lime-A-Way as often as necessary to keep the system free of mineral buildup that can be adversely affect operation.

**600PE:** Pour 8 ounces of de-liming agent into the full float tank. With the spray gun connected and closed, turn the pump ON and allow recirculation, direct the spray gun output into drain for several minutes to purge the de-liming agent from the system.

**1100 PC/HC:** Place hose bib end of the water supply hose and the discharge end of the high pressure hose into a bucket of de-liming solution and run system for 5 minutes to circulate solution through the pump. Connect the supply hose to a hose bib. Turn on the water and flush the system thoroughly.

**Note:** All user replaceable items are available from Spray Master Technologies ® by calling our customer service number at 1-800-548-3373 or (479)636-5776

# Extension Cords

Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from the product. Use only extension cords that are intended for outdoor use. These extensions cords are identified by a marking “Acceptable for use with outdoor appliances; store indoors while not in use.” Use only extension cords having an electrical rating not less than the rating of the product.

Do not use damaged extension cords. Examine extension cord before using and replace if damaged. DO not abuse extension cords and do not yank on any cord to disconnect. Keep cord away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

**WARNING-** To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch the plug with wet hands.

# Grounding

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product 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 risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product – if it will not fit outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adaptor with this product.

## Ground Fault Circuit Interrupter (GFCI) Protection

A GFCI is a safety device that protects the operator from electrical shock hazards by disconnecting power from a circuit to a load when a potentially dangerous condition occurs.

**NEVER BYPASS A GFCI.** Find out the cause or reason why the GFCI opened the circuit. This may require the services of a qualified electrician. Do not attempt any electrical repairs yourself.

This product shall be permanently connected to a dedicated power supply circuit protected by a Ground Fault Circuit Interrupter. This product shall be connected through a service disconnect located at the pump.

# Moving & Storage

**MOVING:** SMT Portable units with wheels must be parked on level and firm locations at all times during use and storage. SMT Hand-carry Portables require care when lifting to prevent injury. Bend at the knees, keep the back straight and hold the unit close to your body when lifting.

**STORAGE:** Store SMT equipment in and appropriate location that prevent tripping and falling hazards for personnel. When storing SMT pressure cleaning systems for extended periods or in freezing conditions, drain all water and flush the system with anti-freeze. 600PE systems are winterized by disconnecting the water supply hose, filling the float tank with anti-freeze solution and operating the pump until the tank is empty (less than 1 minute).

With all other units, place the end of the water supply hose into a 1 gallon bucket is empty (less than 1 minute). Do not allow the pump to run after the tank or bucket is empty.

# Service

If a problem occurs, please refer to the “Diagnostic and Maintenance Chart” in the Express Service Manual. Also, refer to the Cat Pumps Service Manual. If the problem is not resolved, then please call our toll free customer service number (800)548-3373 or (479) 636-5776.

# Chemical Metering Instructions

## CHEMICAL DILUTION CHART & INSTRUCTIONS

Ounces Of Chemical Per Gallon Of Water

**NOTE:** This instruction is for setting the Chemical Metering Valve dilution rate.

		Chemical manufacturers recommended ounces per gallon (Oz/Gal)									
		1/4	1/2	1	2	3	4	5	6	7	8
Pump Flow (GPM)	2.0	1/2	1	2	4	6	8	10	12	14	16
	2.2	5/9	1 1/9	2 1/5	4 2/5	6 3/5	8 4/5	11	13 1/5	15 2/5	17 3/5
	2.9	5/7	1 4/9	2 8/9	5 4/5	8 2/3	11 3/5	14 1/2	17 2/5	20 1/3	23 1/5
	3.0	3/4	1 1/2	3	6	9	12	15	18	21	24
	3.6	8/9	1 4/5	3 3/5	7 1/5	10 4/5	14 2/5	18	21 3/5	25 1/5	28 4/5
	4.0	1	2	4	8	12	16	20	24	28	32
		Ounces of chemical to be injected in one minute (Oz/Min)									

TO CALCULATE AND ADJUST THE CHEMICAL DILUTION FOR A SPRAY MASTER TECHNOLOGIES CLEANING SYSTEM, FOLLOW THE STEPS BELOW.

**NOTE: REFER TO FLOW RATE DECAL ON SMT UNIT FOR DETERMINING GPM .**

STEP 1: FIND YOUR PUMP GPM RATING ON THE LEFT-HAND SIDE OF THE CHART.

STEP 2: FOLLOW THE ROW IDENTIFIED IN STEP #1 TO THE RIGHT UNTIL YOU FIND THE COLUMN HEADING WITH THE CHEMICAL MANUFACTURERS RECOMMENDED OUNCES PER GALLON TO BE INJECTED INTO THE WATER.

STEP 3: THE VALUE AT THE POINT WHERE THE ROW (STEP 1) AND THE COLUMN (STEP 2) INTERSECT IS THE OUNCES OF CHEMICAL THAT SHOULD BE INJECTED INTO THE SMT SYSTEM DURING ONE MINUTE TO ACHIEVE THE MANUFACTURERS RECOMMENDED CHEMICAL SOLUTION STRENGTH.

STEP 4: FILL A MEASURING CUP (GRADUATED IN OUNCES) WITH THE CHEMICAL TO BE INJECTED AND SUBMERGE THE CHEMICAL PICK-UP TUBE WITH FOOT SCREEN INTO THE CHEMICAL .

STEP 5: TURN THE PUMP ON AND SET IT TO INJECT CHEMICAL .

STEP 6: ADJUST THE CHEMICAL METERING DEVICE SO THAT THE OUNCES OF CHEMICAL CALCULATED IN STEP 3 ABOVE IS DRAWN FROM THE MEASURING CUP DURING A PERIOD OF ONE MINUTE. ( THE ADJUSTMENT CAN ALSO BE MADE INJECTING HALF THE CHEMICAL IN HALF A MINUTE).

**EXAMPLE:** A 3.6 gallon per minute (GPM) pump used to apply a chemical requiring a mix ratio of 4 ounces per gallon will need to inject 14 2/5 ounces of chemical during a period of one minute.

**NOTE: CHECK CHEMICAL METERING REGULARLY TO ENSURE ACCURATE CHEMICAL DISPENSING.**





[spraymastertech.com](http://spraymastertech.com)

**SPRAY MASTER TECHNOLOGIES®**  
*A product line of Assembled Products Corporation*  
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**479-636-5776 • 800-548-3373**

SMT-PORT-OM-140103-EN

Price and specifications are subject to change without notice .



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