

# OPERATION, AND INSTRUCTION MANUAL



**STW-500**  
**STW-750**  
**STW-500SC**  
**STW-750SC**

**SPRAY WASH  
CABINET**



**DO NOT** operate or repair this equipment without reading this manual and the safety instructions shown inside. Failure to understand how to safely operate this equipment could result in an accident causing serious injury or death

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	 <b>DANGER</b>
<p><b>A person who has not read and does not understand all operating instructions is not qualified to operate this equipment.</b></p> <p><b>Failure to read and understand safety instructions may result in injury or death.</b></p>	

Safety is a critical factor in the design of spray wash cabinets. The best program starts with a safety-conscious operator. The information highlighted in this bulletin describes operating practices for the benefit of the workers who will use our equipment in their daily jobs. Comments from users are appreciated.

	<b>SAFETY ALERT SYMBOL</b>	 <b>DANGER</b>
<p>The symbol above is used to call your attention to instructions concerning your personal safety. Watch for this symbol. It points out important safety precautions. It means <b>“ATTENTION! Become alert! Your personal safety is involved!”</b> Read the message that follows and be alert to the possibility of personal injury or death.</p>		<p>Immediate hazards which, if not avoided, <b>WILL</b> result in severe personal injury or death</p>
		 <b>WARNING</b>
		<p>Hazards or unsafe practices which, if not avoided, <b>COULD</b> result in severe personal injury or death.</p>
		 <b>CAUTION</b>
		<p>Hazards or unsafe practices which, if not avoided, <b>COULD</b> result in minor personal injury or property damage</p>

## Product Specifications (1)

<b>Model</b>	<b>STW-500</b>	<b>STW-750</b>
Overall Height	66"/1676mm	78"/1981mm
Inside Height	42"/1067mm	54"/1372mm
Inside Width	32"/813mm	32"/813mm
Turntable Diameter	30"/762mm	30"/762mm
Floor Space	44"x43" /1118mm x1092mm	44"x43" /1118mm x1092mm
Load Capacity	500lbs/227kg	1,000lbs/454kg
Stainless Steel Nozzles	19	22
Water Temperature	135°-175°Fahrenheit	135°-175°Fahrenheit
Pump Max working pressure	28 PSI /175KPA	38 PSI /265KPA
Pump Max Flow	54GPM	78GPM
Electric Heater	6 KW	6 KW
Wash Cycle timer	0-60 Minutes	0-60 Minutes
Oil Skimmer Cycle Timer	0-15 Minutes	0-15 Minutes
Tank Capacity	50 Gallons	53 Gallons
Stainless Steel Water Pump	Standard	Standard
Turntable Friction-Drive System	Standard	None
Turntable Sprocket-Drive System	None	Standard
Removable Tank Screen	Standard	Standard
Stainless Oil Skimmer	Standard	Standard
Small Parts Basket	Standard	Standard
Removable Turntable Extension	Standard	Standard
Removable Parts Tree	Standard	Standard
Heavy Duty Caster	Standard	Standard
Steel Cabinet	Yes	Yes
Shipping Weight	730lb/330kg	930lb/420kg
Shipping Volume	2.3 M <sup>3</sup>	2.7 M <sup>3</sup>
Packaging	Steel Pallet and Carton	Steel Pallet and Carton
Motor	1.5HP. 220V AC, 1 PH 60 HZ	3HP. 220V AC, 1 PH 60 HZ
Power Requirement	220V SINGLE PHASE 60HZ	220V SINGLE PHASE 60HZ

## Product Specifications (2)

<b>Model</b>	<b>STW-500SC</b>	<b>STW-750SC</b>
Overall Height	66"/1676mm	78"/1981mm
Inside Height	42"/1067mm	54"/1372mm
Inside Width	32"/813mm	32"/813mm
Turntable Diameter	30"/762mm	30"/762mm
Floor Space	44"x43" /1118mm x1092mm	44"x43" /1118mm x1092mm
Load Capacity	500lbs/227kg	1,000lbs/454kg
Stainless Steel Nozzles	19	22
Water Temperature	135°-175°Fahrenheit	135°-175°Fahrenheit
Pump Max working pressure	28 PSI /175KPA	38 PSI /265KPA
Pump Max Flow	43GPM	68GPM
Electric Heater	6 KW	6 KW
Wash Cycle Timer	0-60 Minutes	0-60 Minutes
Oil Skimmer Cycle Timer	0-15 Minutes	0-15 Minutes
Tank Capacity	50 Gallons	53 Gallons
Stainless Steel Water Pump	Standard	Standard
Turntable Friction-Drive System	Standard	None
Turntable Sprocket-Drive System	None	Standard
Removable Tank Screen	Standard	Standard
Stainless Oil Skimmer	Standard	Standard
Small Parts Basket	Standard	Standard
Removable Turntable Extension	Standard	Standard
Removable Parts Tree	Standard	Standard
Heavy Duty Caster	Standard	Standard
Stainless Steel Cabinet	Yes	Yes
Shipping Weight	730lb/330kg	930lb/420kg
Shipping Volume	2.3 M <sup>3</sup>	2.7 M <sup>3</sup>
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## Introduction

The spray wash cabinet is designed to clean parts with a re-circulated detergent and water solution. The spray wash cabinet cleans with a combination of temperature, pressure, and the chemical action of the detergent. The spray wash cabinet includes an oil skimmer to prolong the life of the cleaning solution. The simple controls and operation are designed to make the unit easy to operate.

## Installation

### **⚠ DANGER**

- High Voltage a certified electrician should do all electrical work.
- Always disconnect power when opening any electrical box.

### **⚠ WARNING**

- Vibration in shipping may have loosened wire connections. Before connecting power, your electrician should check all connections.
- Have your electrician check for proper rotation on all motors

### **⚠ CAUTION**

- Do not fill tank until you are ready for start-up.
- Do not turn heating elements on until tank is filled.

Upon receiving your spray wash cabinet inspect for any visible damage from shipping. If any damage is found, make notation on your bill of lading and contact your freight carrier. Follow your freight carrier's procedure for handling damage.

If no damage is found, remove all packaging material from the machine being careful not to damage the casters on the unit.

Open the door to the unit and unpack all parts and packing materials inside.

**LOCATION:** When choosing a location for your spray wash cabinet, consider the following factors:

- The unit will generate steam. Make sure steam will have no adverse affects in the area surrounding the machine.
- Everyday use will result in liquid spilling on the floor around the machine. Consider the use of traction mats and avoid placing the machine in high traffic areas.
- Allow access for service and utility connections
- Place on a level site.

**ELECTIRCAL:** All electrical requirements are listed on the identification plate on the machine. The wiring diagram is inside the control box. Have your electrician install all suitable wiring and breaker/disconnect box necessary. Do not modify power cord installed on the unit. Once power is installed have your electrician check motors for proper rotation but do not turn on heating elements at this time.

**DRAIN CONNECTION:** A 2" drain is located on the unit.

Make sure you have ready access to a water source. You will be adding water to the tank on a daily basis.

## Detergent Selection

### **⚠ CAUTION**

Using the correct detergent is critical to the performance and longevity of your parts washer.

The manufacturer does not warranty this spray wash cabinet against rust. Rust will occur if the proper detergent is not used, if start-up procedure is not followed, or if your machine is not used on a regular basis. If not regularly used oil should be used on the inside of the machine. Rust can also occur if you use D.I. water for rinsing.

A detergent formulated for mild steel meeting the following criteria should be met:

- The detergent must have rust inhibiting agents.
- The detergent should be strong enough to remove the contaminants, but not so strong that it attacks the metal substrate.
- The detergent should only leave an acceptable amount of residue on the parts. For new parts, you may need a detergent that is “free rinsing”.
- For use in a spray wash cabinet, the detergent must be “low foaming”.

The manufacturer offers a line of detergents developed for use in spray wash cabinets. For information contact our sales department. If the parts are critical, it is the customer’s responsibility to perform any metallurgical tests.

## Operation

The controls for the spray cabinet are as follows:

- **CIRCUIT BREAKERS:** These are located on the back of the unit inside the circuit box. The circuit breakers are used to power on/off the machine.
- **CYCLE TIMER:** Located on the side of the cabinet above the door latch. Used to control the wash cycle.
- **OIL SKIMMER:** Controlled by a toggle switch located on junction box behind the skimmer wheel.
- **THERMOSTAT:** Located inside the back cover of the machine. Used to control the water temperature in the tank. This should be set to a temperature of 140-160 degrees F.
- **SAFETY SWITCH:** Prevents pump from operating when the door is open.

### WARNING

Do not use the safety switch to purposely stop the wash cycle.

Check water level before starting the machine. The ideal water depth in the holding tank is 8”. Water should be even or just above the filter basket. Water level should be checked daily.

To heat the solution in the tank, turn the heat breaker to the on position. Allow at least 1 hour for the solution to reach 140-160 degrees F before first wash cycle. During daily operation the heating elements work automatically as needed.

When solution has reached proper temperature, turn all other breakers to the on position. Place parts on the wash rack making sure parts are placed to allow rotation of the wash rack. Small parts can be placed in wash baskets provided with the machine. Close and latch the door and set the timer to start the wash cycle. Generally, most wash cycles should be 15-20 minutes.

### WARNING

- Make sure door is latched before starting the wash cycle.
- Wear proper protective equipment when removing parts from wash cabinet.

The oil skimmer is not designed for constant use. When floating oil is ¼” to ½” deep, or when oil starts to impede cleaning, operate the skimmer. Before operating oil skimmer place a collection container at the oil skimmer to collect material skimmed. Follow all regulations for disposal of skimmed material.

At the end of daily operations turn off all power to the spray wash cabinet.

### DANGER

Do not use the spray wash cabinet if the door safety switch does not stop the spray pump when the door is open.

## Initial Start-Up Procedure

### **⚠ CAUTION**

- Do not start this procedure until you have read this manual
- Do not fill the tank or start this procedure unless you have the time needed (about 2 hours) to heat the water, add detergent, and run the wash cycle for at least 1 hour.
- Before turning on electrical power, make sure heat and wash timers are off.
- Make sure start up procedure is carefully followed.

For first time use, follow the following procedure:

1. Make sure electrical power to the machine is off.
2. Verify that your electrician has done all necessary work.
3. Verify heat and wash breakers are in the off position.
4. Fill the tank with water. Add water until the water level is just above the removable filter basket.
5. Verify thermostat is set between 140-160 degrees F.
6. Turn on electrical power to the machine.
7. Turn the heater breaker to the on position.
8. When the water temperature has reached the proper temperature, add detergent following the detergent manufacturer's directions. Pour the detergent directly into the filter basket.
9. Close and latch the door. Turn all other breakers to the on position. Set the wash timer to run a 15-minute wash cycle.
10. During the initial wash cycle, walk around the machine and check for leaks.
11. At the end of the wash cycle, open the door.
12. If water was leaking around the door, adjust the direction of the spray nozzles to spray away from the door.

13. Run the spray wash cabinet for at least 1-hour of wash cycles for the next two days.
14. Adjust oil skimmer flanges to make light contact with the skimmer wheel. Use care to not put excess strain on the oil skimmer motor.

Your machine is now ready for daily operation. The more wash cycles you run, the more the cabinet is coated with rust inhibitors.

If you have any questions about start up or installation of your machine contact your provider.

## Solution Disposal

Protect your environment and protect your business from fines by handling your cleaning solution according to federal, state, and local codes. According to federal regulations, which states have to adopt as minimum standards, the dirty cleaning solution in a spray wash cabinet is generally not "hazardous waste".

The two characteristics that you have to be most concerned about are corrosivity and Ep toxicity. Ask your detergent supplier if the pH of your solution is greater than 12.5 and if so, how it can be neutralized. To check for Ep toxicity, you would need to have a sample tested by a laboratory.

Assuming that your solution is not hazardous, or that with minor treatment (e.g. adding acid) the solution can be made non-hazardous, the EPA does not require special storage, documentation, transportation, and processing. Since your solution will have oils, however, you will probably not be able to dump the solution in the sewage line (call your sewage treatment facility) and you certainly can't dump the solution on the ground or in a storm drain. You can separate the oil and solid contaminants from the solution so that the cleaning solution can last for an indefinite period.

## Maintenance

Do not allow the sludge accumulation in the tank to exceed a 1" depth. Otherwise, the sludge build-up could damage the heating element(s) and pump. Depending on the application, some businesses have to clean out the sludge weekly, while others can go months before cleaning out the tank. Since you can't see the sludge, clean out the tank within the first week of operation and develop an appropriate clean out schedule. The following procedure should be followed for sludge removal:

- Disconnect all power to the machine or make sure all breakers are in the off position.
- Remove the wash rack and filter basket from the machine.
- Using the drain, remove solution from the tank. You can save the solution for reuse.
- Scrape out the sludge through the filter basket opening being careful to not hit the heating element.
- Close the drain and install the filter basket and wash rack.
- Fill tank with solution to proper level.

If spray nozzles become clogged you may need to flush the spray tubes. Remove all pipe caps and bottom spray nozzles and run a maximum of 60 second wash cycle.

### **⚠ CAUTION**

When flushing the spray tubes, running a wash cycle longer than 60 seconds could damage the pump motor.

Follow daily and monthly maintenance guidelines included in this manual.

## Warranty

### **Standard Lift & Equipment, Inc. Limited Warranty**

This warranty covers any defects in manufacturing on your Standard Lift spray wash cabinet.

This warranty lasts one (1) year from the date of purchase. Coverage terminates if you sell or otherwise transfer the spray wash cabinet during the period of the warranty.

Standard Lifts and Equipment, Inc. will replace or repair at no charge any part found to be defective for the period of the warranty. You must pay any freight charges. Any labor charges are not covered by this warranty.

Rust, or any problem that is caused by abuse, misuse, or an act of God is not covered in this warranty. Standard Lift & Equipment, Inc. should not be liable in either tort or contract for any loss or damage, direct, indirect, special, consequential, or incidental, arising out of the use or inability to use this product. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

For warranty claims contact Standard Lift & Equipment, Inc.

Standard Lift & Equipment, Inc.  
877-238-2095

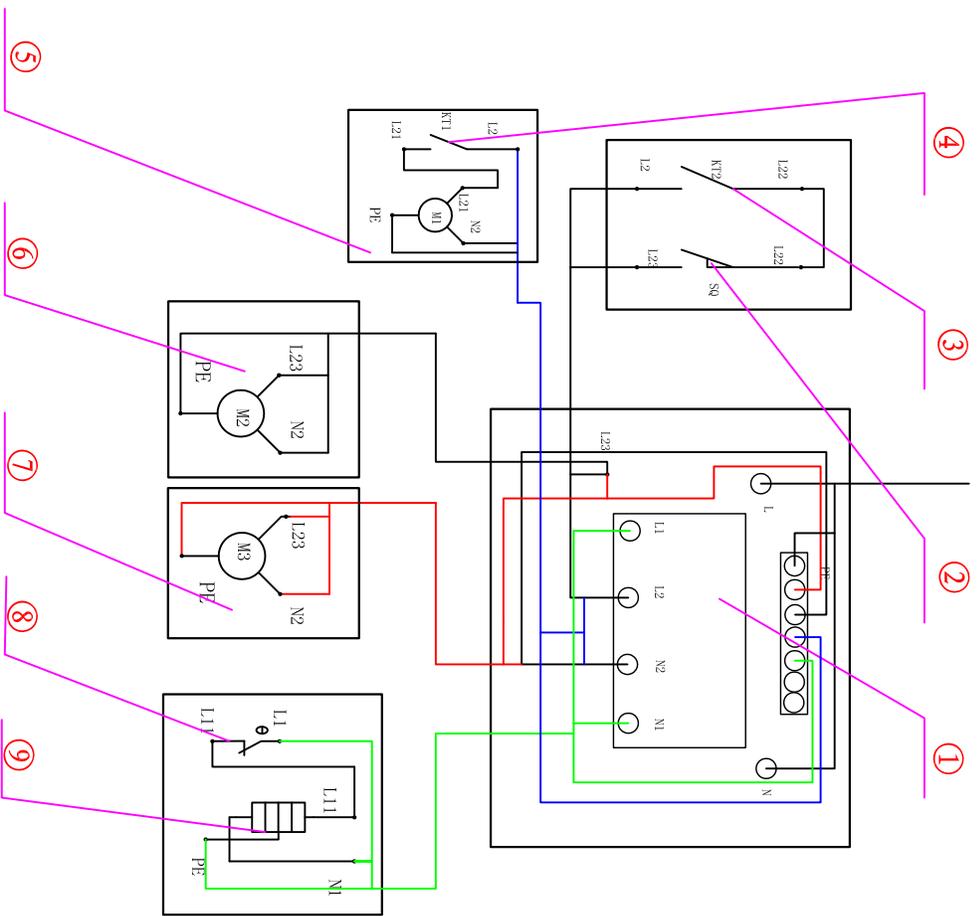
If it is necessary to return the equipment for repairs Standard Lift & Equipment, Inc. equipment must be properly packaged and all transportation costs must be prepaid. Defective parts replaced at no charge must be returned freight prepaid to Standard Lift & Equipment, Inc. within sixty (60) days of the date the replacement parts are shipped or replacement parts must be paid for at the current selling price.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR PROVINCE TO PROVINCE.



## Troubleshooting

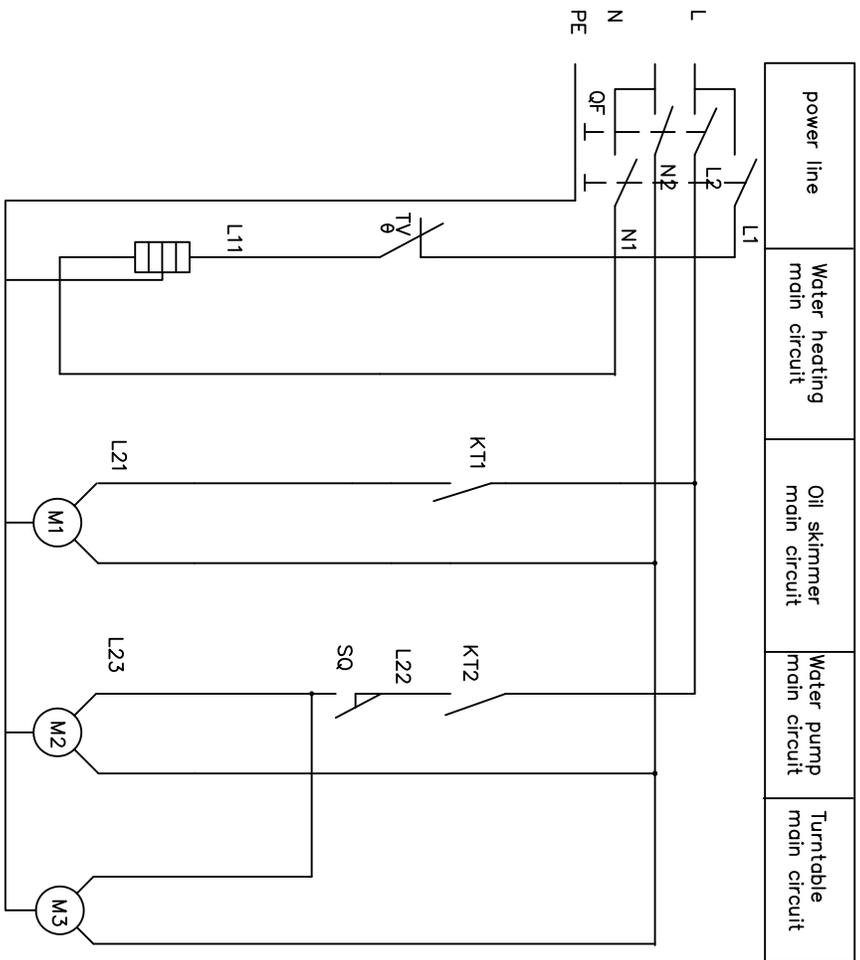
<b>Problem</b>	<b>Probable Cause</b>	<b>Possible Remedy</b>
Unit not working	<ul style="list-style-type: none"> <li>• Check fuse or circuit breaker</li> <li>• Check for correct voltage</li> <li>• Wiring connections</li> </ul>	<ul style="list-style-type: none"> <li>• Replace blown fuse or reset circuit breaker</li> <li>• Supply correct voltage to unit</li> <li>• Repair and insulate all connections</li> </ul>
Pump motor not operating	<ul style="list-style-type: none"> <li>• Pump breaker off</li> <li>• Broken wash timer</li> <li>• Broken door safety switch</li> <li>• Wiring connections</li> <li>• Bad motor starter</li> <li>• Pump is broken</li> </ul>	<ul style="list-style-type: none"> <li>• Turn on breaker for pump</li> <li>• Replace timer</li> <li>• Replace switch</li> <li>• Repair and insulate connections</li> <li>• Consult electrician</li> <li>• Replace pump</li> </ul>
Pump motor operates but has little or no pressure	<ul style="list-style-type: none"> <li>• Water level is too low</li> <li>• Pump is rotating backwards</li> <li>• Pump is broken</li> <li>• Solution is foaming</li> <li>• Spray manifolds or filters are clogged</li> </ul>	<ul style="list-style-type: none"> <li>• Fill water to proper level</li> <li>• Consult an electrician</li> <li>• Replace pump</li> <li>• See below</li> <li>• Clean out</li> </ul>
Solution won't get hot	<ul style="list-style-type: none"> <li>• Thermostat not set at correct temperature</li> <li>• Broken heating element</li> <li>• Broken thermostat</li> <li>• Wiring connections</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust thermostat</li> <li>• Replace heating element</li> <li>• Replace thermostat</li> <li>• Repair and insulate connections</li> </ul>
Poor cleaning	<ul style="list-style-type: none"> <li>• Incorrect detergent</li> <li>• Low detergent concentration</li> <li>• Hard water</li> <li>• Clogged nozzles</li> <li>• Solution is too dirty</li> <li>• Incorrect solution temperature</li> <li>• Low pump output</li> </ul>	<ul style="list-style-type: none"> <li>• Use detergent designed for spray wash cabinet</li> <li>• Adjust detergent level</li> <li>• Use a water softener</li> <li>• Clean spray nozzles</li> <li>• Run oil skimmer or change solution</li> <li>• Adjust thermostat</li> <li>• See below</li> </ul>
Wash table not turning	<ul style="list-style-type: none"> <li>• Pressure spring missing or broken</li> <li>• Worn friction drive wheel</li> <li>• Wiring connections</li> <li>• Motor windings burned out</li> </ul>	<ul style="list-style-type: none"> <li>• Replace spring</li> <li>• Replace friction drive wheel</li> <li>• Repair and insulate connections</li> <li>• Replace motor</li> </ul>
Rust inside cabinet	<ul style="list-style-type: none"> <li>• Wrong detergent</li> <li>• Did not follow start up procedure</li> <li>• Machine used too infrequently</li> </ul>	<ul style="list-style-type: none"> <li>• Remove rust use detergent with rust inhibitors</li> <li>• Remove rust, and change solution using twice the normal detergent level.</li> <li>• Remove rust, oil the inside of the cabinet.</li> </ul>
Solution is foaming	<ul style="list-style-type: none"> <li>• Wrong detergent</li> <li>• Started wash cycle when solution was cold</li> <li>• Concentration too low</li> </ul>	<ul style="list-style-type: none"> <li>• Use low-foam detergent</li> <li>• Allow proper time for solution to heat</li> <li>• Adjust detergent concentration</li> <li>• Add de-foamer</li> </ul>



**PARTS LIST**

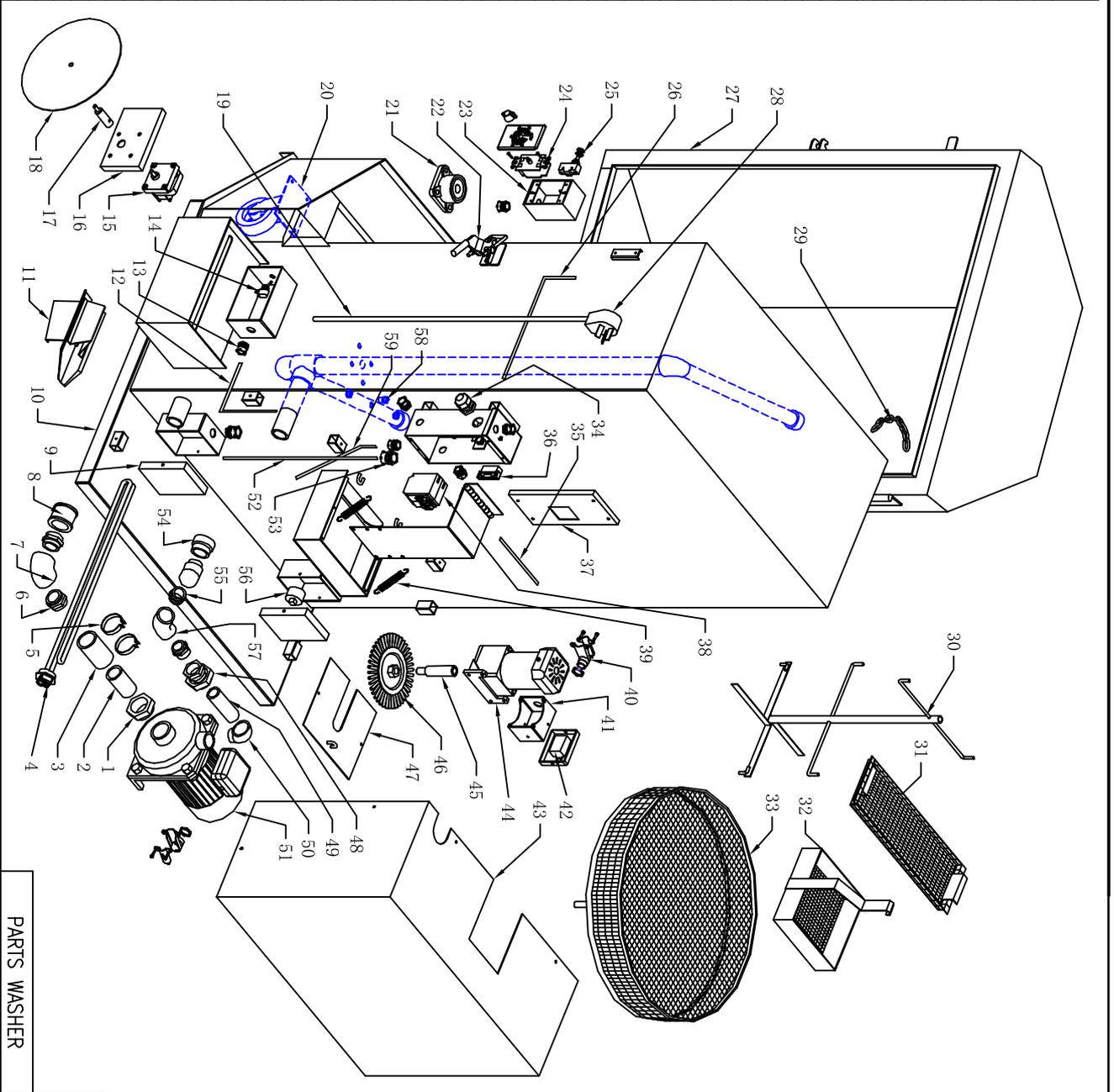
NO	NAME	MANUFACTURER
①	Breaker	Siemens
②	Door safety micro-switch	Omron
③	Wash cycle timer	Intermatic
④	Skimmer cycle timer	Intermatic
⑤	Skimmer motor	W&W
⑥	water pump and motor	CNP
⑦	Turntable motor	ZD
⑧	The thermostat	White Rodgers
⑨	Heater element	Emerson

Wiring Diagram for STW-500 and STW-750



Schematic Diagram for STW-500 and STW-750

INDEX NO.	PART NO.	DESCRIPTION	QTY
-1		1 1/2X1 1/4 REDUCER	1
-2	STD-RS500-64	ZINC-COATED PIPE 1 1/4X3	1
-3	STD-RS500-65	HOSE 1 1/4X5	1
-4		HEATER	1
-5		PIPE CLIP 1 1/4	2
-6		CONNECTOR 1 1/4	2
-7		CONNECTOR 1 1/4X1 1/4X90°	1
-8	STD-RS500-2	CONNECTOR 1 1/4	1
-9	STD-RS500-55	TEMPERATURE SWITCH BOX	2
-10	STD-RS500-55	UNDER PAN	1
-11	STD-RS500-50	OIL SKIMMER	1
-12		ELECTRIC WIRE FOR GEARMOTOR I	1
-13		CONNECTOR 3/8	6
-14		TOGGLE SWITCH	1
-15		GEARMOTOR I	1
-16	STD-RS500-6	GEARMOTOR BOX	1
-17	STD-RS500-13-3	PIN 3/4X3	1
-18	STD-RS500-13	STAINLESS-STEEL PAN	1
-19		ELECTRIC WIRE	1
-20		CASTER 4	4
-21		BEARING	1
-22	STD-RS500-48	QUICK-RELEASE DOOR LATCH	1
-23		OUTDOOR BOX DEEP	1
-24		TIMER	1
-25		SAFETY DOOR SWITCH	1
-26		ELECTRIC WIRE FOR TIMER	1
-27	STD-RS500-51	DOOR	1
-28		ANGLE PLUG	1
-29		CHAIN	1
-30	STD-RS500-47	REMOVABLE TREE RACK	1
-31	STD-RS500-41	REMOVABLE FILTER BASKET	1
-32	STD-RS500-43	PARTS BASKET	1
-33	STD-RS500-42	TURNABLE	1
-34		CONNECTOR 7/8	1
-35		ELECTRIC WIRE FOR GEARMOTOR II	1
-36		CONNECTOR	1
-37		BOX FOR BREAK	1
-38		BREAK	1
-39	STD-RS500-57	CONNECTOR 1/2	2
-40		CONNECTOR 1/2	2
-41	STD-RS500-35-1	ELECTRIC-CAPACITY OF GEARMOTOR BOX	1
-42		ELECTRIC-CAPACITY OF GEARMOTOR	1
-43	STD-RS500-4	BACK COVER	1
-44		GEARMOTOR II	1
-45	STD-RS500-35-3	PIN 1X4	1
-46		STEEL WIRE BRUSH	1
-47	STD-RS500-36	STEEL WIRE BRUSH BOX COVER	1
-48		CONNECTOR 1	1
-49		ZINC-COATED PIPE 1X4	1
-50		CONNECTOR 1X1X90°	2
-51		WATER PUMP	1
-52		ELECTRIC WIRE FOR HEATER	1
-53		CONNECTOR 1/2	2
-54		CONNECTOR 1X1 1/4	2
-55		CONNECTOR 1	1
-56		CONNECTOR 1X1X45°	1
-57		NOZZLE 1/4	1
-58	STD-RS500-22	ELECTRIC WIRE FOR WATER PUMP	19
-59		ELECTRIC WIRE FOR WATER PUMP	1



PARTS WASHER