



## TECHNICAL SPECIFICATIONS FOR

**STERO DISHWASHER MODEL STPCW-\_\_  
FLIGHT-TYPE WAREWASHING SYSTEM  
POWER SCRAPPER SECTION, POWER WASH SECTION,  
POWER RINSE SECTION and  
HIGH TEMPERATURE SANITIZING FINAL RINSE**



### **CUSTOM DESIGN**

**DESIGN:** Shall be fully automatic, rackless, continuous flight-type dishwashing machine 36 1/2 inches wide with 31-1/2 inches of usable belt width, 65-1/2 inches tall and \_\_' long and shall be made up of the following sections:

__"	Belt Loading Section
__"	Power Scrapper Section
__"	Power Wash Section
__"	Power Rinse Section
__"	Drying and unloading section for a complete machine length of __ feet

**STANDARD FEATURE**

**CONSTRUCTION:** The tank and hood shall be formed from 16 gauge, type 304, 18-8, No. 4 mill finish stainless steel, all heliarc welded with a minimum of bolt together construction. The frame is to be constructed of stainless steel angle and flat stock conforming to NSF Standard No. 3. The machine shall be supported by stainless steel adjustable bullet feet. All internal construction is to be stainless steel. The machine shall be **NSF approved at 17,858 dishes per hour** and conform to UL 921.



**STANDARD FEATURE**

**POWER SCRAPER:** A 3 HP, 1750 RPM pump and motor shall be capable of spraying 300 GPM of pre-wash water over the ware. Manifold water restrictors shall be provided so that water pressure from top to bottom can be adjusted to the type of ware being washed. The food soil shall drop onto stainless steel strainer pans, which cover the tank. The screens are held in an inclined position, which, coupled with the water action and final rinse water feed back, automatically moves the food soil to the scrap catchment mounted outside the tank. The outboard scrap catchment can be removed for emptying while the machine is in operation.



**STANDARD FEATURE**

**POWER WASH:** A 3 HP, 1750 RPM pump and motor shall be capable of spraying 300 GPM of detergent water over the ware. Manifold water restrictors shall be provided so that water pressure from top to bottom can be adjusted to the type of ware being washed. Tank area is covered by removable Stainless Steel Strainer Pans.

**STANDARD FEATURE**

**POWER RINSE:** A 3 HP, 1750 RPM pump and motor shall be capable of spraying 300 GPM of water over the ware. Manifold water restrictors shall be provided so that water pressure from top to bottom can be adjusted to the type of ware being washed. Tank area is covered by removable Stainless Steel Strainer Pans.

**RECOMMENDED OPTION**

**COLD WATER AQUASTAT:** Shall control the water temperature in the scrapper tank so that food proteins are not baked onto the ware due to excessive heat.



**STANDARD FEATURE**

**CENTER FED MANIFOLDS:**

Interchangeable Stainless Steel Center Fed Manifolds above and below the ware with stricture free jets and directional vanes are easily removable without tools. Stainless Steel End Caps are also easily removable without tools.

Manifold water restrictors are provided so that water pressure from top to bottom can be adjusted to the type of ware being washed. No "O" Rings, which can be lost, reside on any manifold.

Stainless Steel Piping System feeding from Pumps to Upper and Lower Wash Arms for all Tanks, making washing of inside chamber easily accessible.



**STANDARD FEATURE AUTOMATIC FILL WITH WATER LEVEL CONTROL:**

Automatically fills each tank independently and maintains water level by a stainless steel float system and on an independent basis. The system shall automatically refill the tank in the event of low-water level.



**STANDARD FEATURE**

**COMMON DRAIN AND PLUMBING:** A common two- (2) inch copper drain will connect the discharge from all tanks. All plumbing fixtures shall be of brass, copper and stainless steel.

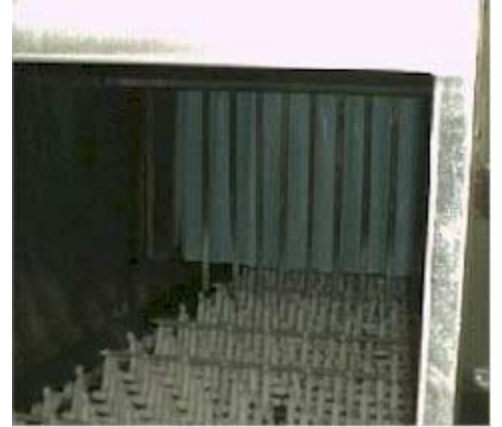
All Plumbing is exposed where it can be easily serviced, eliminating perplexing situations where service is concerned.



**STANDARD FEATURE**

**FINAL RINSE:** Final rinse arms shall be mounted above and below the ware. The final rinse is activated only when ware is in the final rinse section by a rinse rake.

**CONTINUOUS RINSING, OR RINSING ACTION IN CONJUNCTION WITH CONVEYOR OPERATION IS NOT ACCEPTABLE.**



**STANDARD FEATURE**

**FINAL RINSE:** The expended final rinse water is reused in the power rinse tank and then piped directly to the power scrapper tank for re-use, by-passing the power wash tank completely. This ensures that the wash detergent is not diluted.



**STANDARD FEATURE**

**AUTOMATIC ENERGY SAVING**

**SHUTDOWN FEATURE:** Will shut the conveyor drive motor and pumps off if no racks pass through the final rinse section. The timer can be set between 1 to 17 minutes.



**MANDATORY TYPE OF TANK HEAT**

**ELECTRIC TANK HEAT:** Provided by five (5) 5 KW (25 KW total) electric immersion heaters in the wash tank and five (5) 5 KW (25 KW total) in the rinse tank, thermostatically controlled with stainless steel float type low-water cut-off. Immersion heaters shall be mounted in the bottom of the tank.

**MANDATORY TYPE OF TANK HEAT**

**STEAM COIL TANK HEAT:**

Thermostatically controlled stainless steel steam coils, mounted in the tank and designed to return steam to the generator. A steam trap is to be mounted on the steam return line.



**MANDATORY TYPE OF TANK HEAT**

**STEAM INJECTOR TANK HEAT:** Thermostatically controlled stainless steel steam injectors, mounted in the tank.

**MANDATORY TYPE OF TANK HEAT**

**NATURAL GAS, INFRARED - SINGLE BURNER SYSTEMS** - Thermostatically controlled, single burner 96,000 Btu/hour system per heated tank. Unit shall have fully patented design, all stainless steel construction submerged cylindrical primary heat exchanger tubes, secondary and tertiary heat recirculation boxes and 1-5/8" diameter exhausting flues. Unit shall utilize cylindrical infrared burners, forced air blowers, electro-mechanical air switches, electronically controlled silicon carbide pilotless hot surface ignition, factory adjusted gas pressure regulators, gas valves with pressure taps, labeled operating lights for burners and blowers, labeled operating and installation instructions. Systems shall have a common gas line. Blowers shall be physically shielded on sides, bottom and front for protection. System shall operate at 3" water column manifold pressure and operate at combustion and thermal efficiencies of over 80%.



**OPTION IF REQUIRED**

**ELECTRIC BOOSTER HEATER:** Booster to be sized for 180-degree Final Rinse Temperature. Factory mounting, plumbing and wiring of the booster is included. Booster is mounted under the Unload Section of machine.



**OPTION IF REQUIRED**

**STEAM BOOSTER HEATER** Booster to be sized for 180-degree Final Rinse Temperature. Factory mounting, plumbing and wiring of the booster is included. Booster is mounted under the Unload Section of machine.



**OPTION IF REQUIRED**

**NATURAL GAS BOOSTER HEATER:** Booster to be sized for 180-degree Final Rinse Temperature. Factory mounting, plumbing and wiring of the booster is included.



**STANDARD FEATURE**

**TOP MOUNTED CONTROLS**

Stainless Steel Control Panel mounted on top of machine, away from water. All motors shall be factory wired in waterproof conduit and fittings to a common connection point. All wiring shall be numbered and color-coded.



The machine shall be:  
\_\_\_ volts, \_\_\_ cycle, \_\_\_ phase

**STANDARD FEATURE**

**TOP MOUNTED CONTROLS**

All wiring shall be numbered and color-coded.



### **RECOMMENDED OPTION**

#### **MOUNTED CIRCUIT BREAKER PANEL:**

Mounted Circuit Breaker Panel permits Single Point Connection for all Electrical Requirements of the machine and provides a breaker of each motor and Control Circuit with **Master Disconnect**. This feature is used as an emergency quick disconnect to shut down all the electrical to the machine.

In the event one motor breaks down, the breaker for that motor can be turned off so the machine can still be utilized until a new motor is installed.



### **STANDARD FEATURE**

**CONVEYOR DRIVE:** The conveyor drive shall be a variable speed unit capable of adjustment from 2 to 12 feet per minute and shall be equipped with a reversing switch so the machine can be reversed in the event of jamming. The belt shall move over stainless steel sprockets on each end of the machine and the belt shall be adjustable with enclosed take-up bearings.



### **STANDARD FEATURE**

**CONVEYOR DRIVE:** The conveyor system is powered by a 1/2 HP motor and gear reduction drive. The drive assembly rotates a stainless steel chain, which, in turn, engages three dollies simultaneously, providing the propelling force. Because the conveyor system rolls on ball bearing wheels, it can be moved forward manually in case a jam occurs.



**STANDARD FEATURE**

**LIMIT SWITCH TREADLE** allows conveyor to stop instantly when ware touches it with no carry-on or travel to prevent breakage of ware and/or damage to the machine.



**STANDARD FEATURE**

**CONVEYOR BELT:** The conveyor belt shall be made up of stainless steel rods with side and center stainless steel tension links, and "Hi-D" rollers, carrying the belt on stainless steel angle tracks. Peg-links shall be molded of CELCON, which is not subject to hydrolysis or electrolytic action. Peg links must not mark or chip ware and shall be individually replaceable without disassembling the belt.



Conveyor Belt to have Cross Rods every 4<sup>th</sup> Row to eliminate racks getting stuck in fingers of conveyor belt.

**STANDARD FEATURE**

**PUMP AND MOTORS:**

Pump and motor is capable of spraying 300 GPM of water over the ware. The motors have an extended stainless steel shaft with packless ceramic seal. The pump has easily removable inspection plates, front and side, and is to be self-draining.



**STANDARD FEATURE**

**PUMP AND MOTORS:**

The extended shafts reduce the amount of heat absorbed by the motor from the heated wash and rinse tanks resulting in a longer life span of the motor.





**STANDARD FEATURE**

**TEMPERATURE GAUGES:** Shall be housed in stainless steel enclosures on top of the machine in areas protected from accidental damage and facing the operators for visual check. A temperature gauge shall be provided for each scrapping, washing, rinsing and final rinse section of the machine. The temperature probe shall be mounted in the manifold of each spray system for protection and for an accurate temperature reading.



**STANDARD FEATURE**

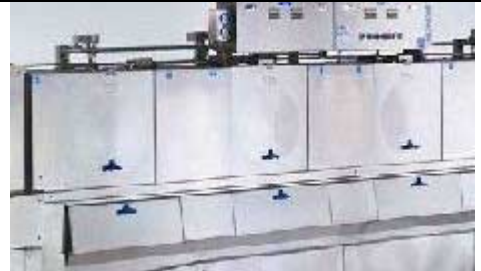
**LIFT OUT REMOVABLE DOORS:** Completely removable doors allow for proper cleaning of the interior of the dishwasher and the lower half of doors, which could be hard to reach to clean properly. These doors are used primarily with low ceiling height.



**STANDARD FEATURE**

**INSPECTION DOORS:** Provide 3 in the front of the machine plus a scrap or strainer pan removal door below each one. Provide one inspection door at the center of the rear side. The entire cleaning operation shall be possible from the front side of the machine.

**REMOVABLE DOORS:** Completely removable doors allow for proper cleaning of the interior of the dishwasher and the lower half of doors, which could be hard to reach to clean properly.



**STANDARD FEATURE DRAIN VALVES:**

Shall be stainless steel/nickle alloy poppet type drain valve. Stainless steel/nickle seats and castings assure a leak-free seal.

Each drain valve is provided with a clean out for removal of accumulated waste. The valves shall be externally controlled for hand or foot operation.

**STERO DRAIN VALVE ASSEMBLY**

- 1. STAINLESS STEEL CAST DRAIN VALVE
- 2. STAINLESS STEEL INVESTMENT CAST POPPET
- 3. 2" NPT THREADED FITTINGS



**STANDARD FEATURE**

**DOOR SAFETY SWITCH:** Shall prevent the machine from running if the door is open. If the door is opened during operation, the machine will automatically shut-off.



**STANDARD FEATURE**

**KIT #55:** A pre-plumbed and installed system that includes a 3/4-inch pressure reducing valve, shock arrestor, a flow pressure gauge and line strainer prior to the solenoid valve.



**STANDARD FEATURE**

**VENT COWL:** Vent Cowls provide efficient ducting of steam and excessive heat.

Provide vent duct receivers 4 x 31-1/4 I.D. with locking dampers at each end of the machine for duct connection.

Load End Requires 500 CFM  
Unload End Requires 1000 CFM



### **STANDARD FEATURE**

**DRAIN PANS:** Both loading and unloading sections shall be completely under-panned with 16-gauge stainless steel so that these areas will drain to the internal plumbing system. Natural water drainage off the conveyor belt shall provide sufficient water to flush down food soil. This eliminates the necessity for a flush-down system. Clean-out doors at each end and sides of the machine shall be provided.



### **RECOMMENDED OPTION**

**DRYING TUNNEL:** An Extended Vent Cowl/Drying Tunnel is being provided to assist in the drying process.



### **OPTION IF REQUIRED**

**PRISON PACKAGE: The Prison package includes the following:** All control Panels will be provided with Welded and Lockable Stainless Steel Hasps so access is restricted. Cylinder Type Locks will not be acceptable. Control Switches will be made Tamperproof with an Access Limiting Shield. All Conveyor rods will be Welded, rendering them Tamperproof. Temperature Gauges will be enclosed behind Stainless Steel Wire Mesh. Plastic Strip Curtains will be hung with wooden dowels. All Stainless Steel Enclosure Panels will be secured with security screws. Machine Door Handles will be non-removable welded Stainless Steel with an Insulated Gripping Bar. A Welded Stainless Steel perforated under carriage to be provided to prevent access from the bottom of the machine.

### **OPTION IF REQUIRED**

**SEISMIC FEET:** Machine to be equipped with flanged seismic feet so that machine can be anchored according to SMCNA guidelines.

**OPTION IF DESIRED**

**WASH DOWN/CLEAN-UP HOSE:** The machine will be provided with a quick-coupling hose bib, on the front of the machine, plumbed in the 140 degree water supply line with a 25' hose and nozzle to facilitate cleaning procedures on the dishwasher and general clean-up in the scullery area.



**OPTION IF REQUIRED**

**BLOWER DRYER:** The 2HP Blower Dryer unit shall be steam heated and top mounted above the conveyor belt. The blower shall be supported by a stainless steel frame and enclosed in stainless steel panels matching the finish of the machine. The Blower-Dryer is completely pre-plumbed and wired to provide an integrated package. Fully equipped with a 2 HP vane axial blower with overload protection. The noise level generated by the blower-dryer will remain below 35 decibels.



**PRODUCTION DATA**

Dishes per hour.....	17,858
Conveyor Speed Adjustable.....	2 to 12 FPM
Maximum Water Consumption/GPH.....	336
Pump Capacity/GPM	Scrapper.....300
	Wash.....300
	Rinse.....300
Belt Width.....	31"

**WARRANTY:** All new Stero dishwashers are warranted against defects in workmanship and materials for a period of one year from the date of initial start up or 12 months from shipment, whichever occurs first. Any part or material found to be defective by our authorized service representative will be replaced or corrected. The labor necessary to replace or correct the defect is included under our warranty.