

APPLICATION

The Reliance Synergy Washer/Disinfector is intended for use in the cleaning and disinfecting of reusable utensils, trays, glassware, bedpans and urinals. It can also be used for rubber and plastic goods, simple hard-surfaced rigid surgical instruments, such as forceps and clamps, and other similar and related articles found in healthcare facilities.

DESCRIPTION

The Reliance Synergy Washer/Disinfector is a mechanical washer equipped with an Eagle 3000 Stage 3 control system. The washer/disinfector is designed with nine adjustable cycles. One additional cycle is available for customized programming to meet specific operating requirements. Three injection pumps are provided with a standard washer/disinfector. One enzyme pump, one detergent pump and one lubricant pump (for Thermal Rinse phase) increase the flexibility of the customized cycles. Up to five injection pumps can be installed. Each preprogrammed cycle is equipped with Pre-Wash, Enzyme, Wash, Rinse and Thermal Rinse phases.*

* *Optimized Fast Cycles are an available option for maximum productivity.*

The washer/disinfector offers both manifolded and non-manifolded washing. The washer/disinfector is available with a power vertical sliding door in a double-door configuration.



(Typical - details may vary.)

Size (W x H x L)

Exterior dimensions:

- 42 x 80 x 36-1/2" (1067 x 2032 x 927 mm)

Interior chamber dimensions:

- 26-1/2 x 26-1/4 x 26" (673 x 667 x 660 mm)

Load height:

- 31" (787 mm) above finished floor

The Selections Checked Below Apply To This Equipment

POWER/VOLTAGE*

Steam-Heated Unit

- 208 Vac, 60 Hz, 3-Phase, 4-Wire
- 480 Vac, 60 Hz, 3-Phase, 3-Wire
- 600 Vac, 60 Hz, 3-Phase, 3-Wire

Electric-Heated Unit

- 480 Vac, 60 Hz, 3-Phase, 3-Wire
- 600 Vac, 60 Hz, 3-Phase, 3-Wire

OPTIONS

- Independent Monitoring
- Non-Vented System
- Language Package
 - French
 - Spanish

ACCESSORIES†

- Air Compressor
 - 110-115 Volt
 - 200-240 Volt
- Multi-Voltage Transformer
- Seismic Tie-Down Kit
- Drain Discharge Cool Down Kit

ACCESSORIES (Cont'd)†

- Condensate Return Cool Down Kit (for Steam-Heated Units Only)
- Bottom Utility Connections
- Control Inter-Change
- Remote Control Extension, 50' Load Side
- Remote Control Extension, 50' Unload Side
- 2-Level Mixed-Load Rack†
- 3-Level Manifold Rack†
- 4-Level Manifold Instrument Rack†
- 5-Level Manifold Instrument Rack†
- Anesthesia/Respiratory Rack†
- Instrument Mesh Tray (Without Lid - Unit)†
- Instrument Mesh Tray Lid†
- Hold-Down Screen†
- Rigid MIS Instrument Rack†
- 4-Level Suction Tips/Instrument Manifold Rack†
- Transfer Cart
- Universal Transfer Cart
- Additional Chemical Pump
 - One
 - Two

ACCESSORIES (Cont'd)†

- Fast Cycle Program for Prolystica® Ultra Concentrate Products for Instrument and Utensil Cycles With Field Installation.
 - Without Independent Monitoring
 - With Independent Monitoring

REMOTE MONITORING

- ProConnect® Response Center (Remote Monitoring, Priority Technical Support, Customer Care Center Access, Equipment Performance Reports) Available Only in U.S., Canada and Latin America.

* *Careful consideration must given to voltage selection prior to ordering. Later changes require substantial field modification.*

† *Refer to SD867 for Material Handling Accessories.*

Item _____

Location(s) _____

STANDARDS

The Reliance Synergy Washer/Disinfector complies with the following standards, as certified by UL:

- **Underwriters Laboratories Standard (UL)** 61010-1, 2005.
- **Canadian Standards Association (CSA)** CAN/CSA-C 22.2 No. 61010-1, second edition.
- **Governing Directive for the Affixing of the CE Mark:** Medical Device Directive 93-42-EEC as amended by 2007-47-EC.
- **Standards Applied to Demonstrate Conformity to the Directives:** EN/IEC 61010-1; EN/IEC 61326-1; EN/IEC 61010-2-040.
- **Additional Standards and Guidance Documents:** HTM-2030; ISO 15883-1; ISO 15883-2: if Independent monitoring option is present.

STANDARD FEATURES

Vertical sliding doors are constructed of **tinted, tempered glass** with stainless-steel trim to allow the operator to view the chamber with the doors closed. While the cycle is in progress, glass doors remain cool to the touch. Doors are pneumatically activated with a built-in safety system.

Sliding doors create an airtight seal and are configured for power door operation.

- **Power doors** are opened and closed automatically using touch pads located on the control panel. If a power failure occurs, doors can be opened manually. A door interlock feature is provided to prevent cross-contamination.

Stainless-steel pump is powered by a dual-speed motor. High pump speed provides the equivalent capacity of a 7.5 hp (5.6 kW) motor, 240 U.S. gal./min at 70 ft (910 L/min at 21.3 m) head pressure. Low pump speed provides the equivalent capacity of a 2.0 HP (1.5 kW) motor, 90 U.S. gal./min at 25 ft (341 L/min at 7.6 m) head pressure. Pump impeller is mounted directly on the motor shaft and does not require additional bearings. Pump motor is equipped with a drip-proof frame, magnetic starter, overload protection and sealed bearings (not requiring periodic lubrication).

Pump, spray system and all recirculating piping are of stainless-steel construction.

Single removable stainless-steel filter in the chamber sump prevents debris from entering the pump.

Heating coil (steam or electric) at the bottom of the wash chamber (sump) raises and maintains water temperature up to 180°F (82°C) during the Wash phase and up to 203°F (95°C) during the Thermal Rinse phase.

Rotary spray assemblies are positioned (one at top and one at bottom of chamber, each measuring 24-3/8" [620 mm] long) to reach all surfaces of the load. Every manifold used with the Reliance Synergy Washer/Disinfector has bi-directional rotary arms positioned on the top and bottom of each load shelf. Depending on the type of rack accessory in the chamber, the manifold connector automatically connects to the accessory at the start of each cycle.

16-W fluorescent lamp, mounted within an explosion/vapor-proof enclosure, illuminates the chamber interior.

Wash chamber is constructed of 16-gauge, #304 L stainless steel (No. 4 finish), argon-welded; wash chamber is of sanitary-type design for complete drainability. All horizontal fixed surfaces are sloped, overlapping metal sheets are minimized to reduce hard-to-clean locations, and there are no dead legs of more than six times the pipe diameter. A complete drain water sensor detects the presence of water in the piping.

Double-walled, insulated construction of chamber exterior reduces heat loss and noise level to the work area.


Chemical injection pumps. The system comes with one enzyme and one detergent injection pump which automatically add a selected quantity of chemical from 1/8 to 2.0 oz/gal (1.0 to 16 mL/L). Up to two additional chemical pumps give flexibility to wash with a neutral process, dual alkaline/neutralizer process, or to vary the chemical used, depending upon the load.

One injection pump is also provided to automatically add a selected quantity of lubricant (from 0 to 2 oz/gal [0 to 16 mL/L]) during the Thermal Rinse phase.

If desired, up to two additional chemical injection pumps can be installed on the washer/disinfector. Optional injection pump(s) can be ordered alone and/or with the Fast Cycles for Instruments and Utensils option.

A low-level sensor is included to indicate when the detergent level in the container is low, or when insufficient chemical is available for the next cycle.

ENGINEERING DATA

Shipping Weight lb (kg)	Operating Weight lb (kg)	A-Weighted Equivalent Surface Sound Pressure Level*		Heat Loss BTU/h (kJ/h) @75°F (24°C) 40% RH Ambient		Water Consumption per Cycle U.S. gal (L)			Steam Consumption per Cycle lb (kg)	Pure Water Consumption per Cycle U.S. gal (L)	
				Vented	Non-Vented (option)	Hot	Cold				
							Vented	Non-Vented (option)			Drain Disch. Cooldown (option)
1075 (488)	1200 (544)	67.6 dB	High Impingement †	1580 (1667)	add 7200 (7596)	38 (144)	9.5 (36)	add 15.7 (59.5)	add 14.5 (54.9)	16 (7.3)	9.5 (36)
						11.6 (44)	5.8 (22)	add 9.7 (36.7)			

* Calculated as described in ISO-3746 Standard.
† Based on Instrument Cycle.

‡ Based on Utensil Cycle.

Pulsed enzyme treatment, following the Pre-Wash phase, is proceeded with hot tap water. The pulsed enzyme is a sequence of soaking and recirculation of hot water with enzyme. The enzyme is automatically injected at a preset quantity of 1.0 oz/gal (8.0 mL/L), but can be manually adjusted between 1/8 and 2.0 oz/gal (1.0 and 16 mL/L).

Drying system is manifolded and circulates HEPA (High Efficiency Particulate Air) filtered air through piping, accessories and chamber. Includes a 1.5 HP (1.1 kW) blower at 60 Hz. Three electric heaters totalling 10.1 HP (7.5 kW) heat maintain chamber air temperature at 180 or 210°F (82 or 99°C).

Vented system. Chamber vapors are exhausted to the building exhaust system through a 3.0" (76 mm) OD vent connection located on top of the chamber.

Airtight doors and HEPA filter. Unit is equipped with airtight doors. All chamber incoming air passes through a HEPA filter during the Drying phase to prevent any contamination of the load.

Control panel, mounted at eye level to the right of the chamber, allows easy monitoring of all cycle phases.

The control system includes **nine pre-programmed, adjustable cycles** (Fast Instruments, Fast Utensils, Gentle, Instruments, Glassware, Utensils, Plastic Goods, Anesthesia/Respiratory Goods, and Rigid MIS) and **one custom programmable cycle**. Once the cycle is started, programmed cycle values are locked in and cannot be changed until the cycle is completed. Access to the load is restricted (via an access code) until the cycle is successful.

Decontamination (Descaling) cycle is provided for weekly cleaning of the chamber, piping and accessories. Descaling cycle is factory programmed and cannot be modified by the operator.

Priming cycle is provided for automatic priming of the chemical pump(s) on initial start-up of the equipment, or as needed.

Optimized sump design and optimized water consumption control the quantity of water injected according to the pump speed. The quantity of water necessary at low speed is less than at high speed.

Top utility connections facilitate installation, all utilities (including vent, steam, electric and water) are connected on the top of the washer. Top water injection gives a secure air gap of 31-1/2" (800 mm). Backflow preventers are not required for hot and pure water.

Piping, valves, electrical components and wiring are easily accessible through access panels. Ports are provided on the cold, hot and pure water lines so gauges can be installed to monitor utilities.

ProConnect Response Center - Minimize response time and minimize unscheduled downtime on your equipment. Secure, internet-based, 24/7 remote monitoring enables both Predictive Maintenance as well as instant alerts to STERIS when there is an equipment alarm. Also included are priority technical support, online parts ordering, equipment performance dashboards, and scheduling service at eservice.steris.com.

CYCLE DESCRIPTION

ADVISORY NOTE: *STERIS does not intend, recommend nor represent in any way that this Reliance Synergy Washer/Disinfector be used for the terminal disinfection or sterilization of any regulated medical device. Reliance Synergy Washers/Disinfectors are intended only to perform an initial step in the processing of soiled, reusable medical devices. If medical devices will be contacting blood or compromised tissues, such devices must be terminally processed in accordance with good hospital practices before each use in human patients.*

On initial daily start-up, setting the POWER-OFF/STANDBY switch to POWER prepares the washer/disinfector for cycle operation.

Once **treatment cycle** is selected, the washer/disinfector automatically processes the load through the following standard phases (additional phases are included in certain treatment cycles depending on unit configuration):

- **Pre-Wash.** Cold water enters the sump from the building supply. Once the sump fills, pre-wash water is recirculated and sprayed over the load for two minutes (factory-setting). On completion of the phase, water is sent to the drain. Recirculation time is adjustable from 15 seconds to 15 minutes.
- **Pulsed Enzyme.** Hot tap water enters sump from the building supply, where a selected amount of enzyme detergent is added automatically. The load is sprayed with enzyme solution for 4.0 seconds, then allowed to soak on instruments for 26 seconds. Spray/soak pattern is repeated for the selected time interval (4.0 to 15 minutes). On completion of the phase, the solution is sent to drain, and the load is rinsed with hot water.
- **Wash.** Hot tap water enters the sump from the building supply, where a selected amount of detergent is added automatically. Detergent solution is heated and maintained at a temperature ranging from 140 to 180°F (60 to 82°C); factory setting is 150°F (65°C). Once set temperature is reached, solution is recirculated and sprayed over the load for the selected time interval (2.0 to 15 minutes). On completion of the phase, the solution is sent to the drain.
- **Neutralizer.** Hot tap water enters the sump from the building supply, where a selected amount of neutralizing detergent is added automatically. Detergent solution is heated and maintained at a temperature ranging from 140 to 180°F (60 to 82°C); factory setting is 150°F (65°C). Once set temperature is reached, the solution is recirculated and sprayed over the load for the selected time interval (2.0 to 15 minutes). On completion of the phase, the solution is sent to the drain.
- **Rinse.** Hot tap water enters the sump from the building supply. Water may be heated and maintained at a temperature ranging from 110 to 180°F (43 to 82°C) for 15 seconds (factory-setting). Once the sump fills, rinse water is recirculated and sprayed over the load for the selected time interval (15 seconds to 15 minutes). On completion of the phase, water is sent to the drain.

- **Thermal Rinse.** Pure water, or hot tap water, enters the sump from the building supply. Pure water rinse is recirculated, heated and maintained at a temperature ranging from 180 to 203°F (82 to 95°C). Once the set temperature is reached, rinse water is recirculated and sprayed over the load for the selected time interval (1.0 to 10 minutes).

In North American washing applications (60-Hz units), a lubricant is automatically injected during the Thermal Rinse at a concentration of 1/8 to 2.0 oz/gal (1.0 to 16 mL/L).

On completion of the phase, water is sent to the drain.

- **HEPA-Filtered Drying.** Hot air is recirculated over the load for 6.0 to 60 minutes at low temperature (180°F [82°C]), or 6.0 to 30 minutes at high temperature (240°F [116°C]).

During the Drying phase, a small quantity of air (approximately 50 scfm) is exhausted through the building vent system, or through the condenser (non-vented system option) to reduce humidity. This exhausted air is replaced by HEPA-filtered fresh air.

The drying efficiency is enhanced by high convection of hot air through diffusers in the chamber and piping in the manifolded racks.

On completion of daily usage, the washer can be placed in a STANDBY Mode by setting Power-Off/Standby switch to OFF/STANDBY position.

Once the switch is set, there is a one-minute delay before the power doors automatically lock.

CONTROL SYSTEM

Design Features

Microcomputers monitor and control washer/disinfector operations and functions. Cycle progresses automatically through the designated phases as programmed.

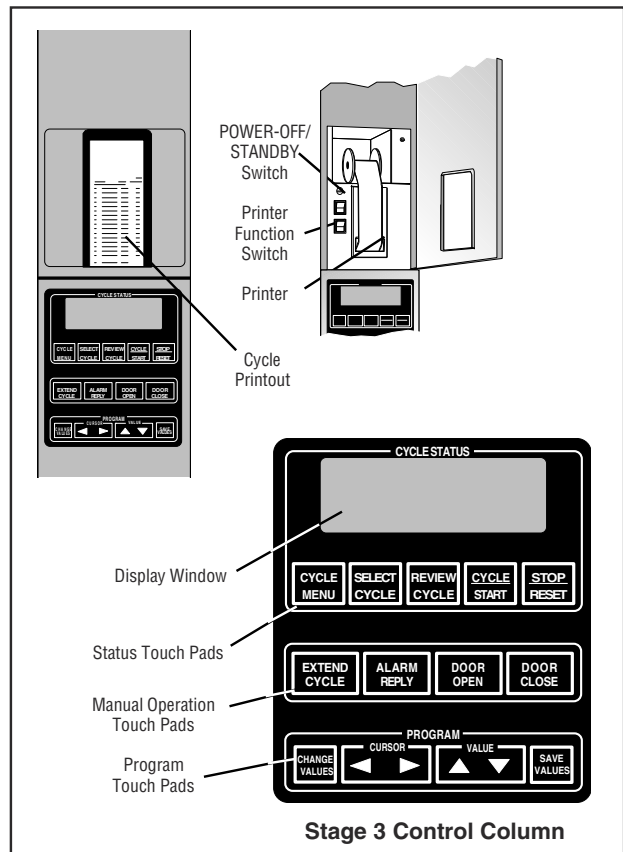
The control system features **preprogrammed temperature ranges** for each cycle. If the operator selects an out-of-range temperature setting when modifying the cycle values, the control system alerts the operator with a reference message, and halts further operation until the correct value is entered. The control does not monitor pressure, chemical volume or conductivity.

Controls

Controls are mounted in a vertical column to the right of the chamber on the load side, and to the left of the chamber on the unload side. Salient features include:

1. **Hinged door at the top of load side control column** provides access to:
 - **POWER-OFF/STANDBY switch** includes two settings which direct operation of the control.

Positioning switch to POWER initializes the controls and prepares the washer/disinfector for daily cycle operation, positioning switch to OFF/STANDBY places washer/disinfector in Standby Mode and deactivates the main control panels.



- **Printer function switch** controls the following two printer functions:

- » **Print.** Pressing the top of the printer function switch generates a printout of the actual chamber water temperature and actual chamber air temperature during the optional Drying phase.
- » **Print values.** Pressing the bottom of the printer function switch generates a complete printout of all currently set cycles and cycle values.
- » **Integral thermal printer** provides an easy-to-read **printed record** of whether the load was properly rinsed at the preset temperature, as well as a complete list of the alarm and abort in-cycle messages. Printer take-up spool automatically stores an entire roll of paper, providing cycle records which can be saved for future reference.

CYCLE - FAST UTEN		CYCLE - FAST INST	
=====		=====	
ENTER HOSPITAL NAME		ENTER HOSPITAL NAME	
ENTER DEPARTMENT		ENTER DEPARTMENT	
CYCLE START	8:23:45A	CYCLE START	8:44:01A
CYCLE DATE	3/06/13	CYCLE DATE	3/06/13
CYCLE NUMBER	0000001	CYCLE NUMBER	0000002
UNIT NUMBER	3604403005	UNIT NUMBER	3604403005
MOTOR SPEED	= LOW	MOTOR SPEED	= HIGH
-----		-----	
TREATMENT TIME		TREATMENT TIME	
-----		-----	
TEMP RECORD STARTED AT	3/06/13 8:23:45AM	TEMP RECORD STARTED AT	3/06/13 8:44:01AM
PRE-WASH1	8:23:46A	PRE-WASH1	8:44:01A
-TIMER START @	8:24:21A	-TIMER START @	8:44:59A
TEMP=	86.1F	TEMP=	73.5F
COMPLETE AT	8:25:23A	COMPLETE AT	8:47:01A
TEMP=	90.9F	TEMP=	95.3F
-----		-----	
WASH 1	8:25:53A	WASH 1	8:47:46A
PUMP 3	1/2 OZ/GAL	PUMP 2	1/2 OZ/GAL
*****		*****	
DETERGENT		DETERGENT	
RELIANCE SV2000		RELIANCE SV4000	
*****		*****	
INJECTED AT	8:48:19A	INJECTED AT	8:48:19A
RMPI CTF DT	8:50:14A	RMPI CTF DT	8:50:14A
=====		=====	

Sample Printouts — Factory-Set Cycle

2. **Control panel**, consisting of a **display window** and three rows of membrane-type **touch pads**, is included both on the load-side and unload-side control columns. Cycle initiation and cycle value programming can be performed from either control panel.

- **Display window** features a 2-line x 20-character, easy-to-read vacuum fluorescent display. Display shows cycle status, time, temperature, warnings and instructional messages. The display also indicates any abnormal conditions that may exist when a cycle is in progress. All messages are complete readouts with no codes to be cross-referenced.
- **Status touch pads** allow the operator to view available cycle menus, select a cycle, review a cycle before processing, and start, stop, and abort cycles.
- **Manual operation touch pads** allow the supervisor to double the cycle time while reviewing the cycle or during processing, acknowledge alarm conditions and open and close the power chamber doors.
- **Program touch pads** allow the supervisor to bypass optional cycle phases and/or modify factory-set cycle values to meet specific operating needs. Available cycles, along with phase times and temperatures for each cycle, can be modified using the CHANGE VALUES touch pad.

3. **Operator/supervisor touch pad (selectable features)** are accessible through either control panel.

- **Time display and printout units** permit selection of either **AM/PM** or **24 hour**.
- **Security access code** requires entry of a **four-digit access code** to change cycles and cycle values. Pressing the CHANGE VALUES touch pad causes the display to request entry of an access code. If the access code is not properly entered, the display advances to the first cycle (and related cycle values) not requiring an access code.
- **Code access** is accessible by the supervisor.
- **Date and time** permits change of date and time.

Technical Control Data

Control system consists of two microcomputer printed circuit boards located within the unit.

An **internal battery** backs up all cycle memory for up to ten years. If a power failure occurs during a cycle, the control battery backup system verifies that cycle memory will be retained. Even if the RAM battery should fail, factory-setting values will be preserved in the control's main EPROM chip.

Resistive Temperature Detectors (RTDs) sense temperature inside the chamber. These signals, converted into electrical impulses, provide accurate control inputs and readouts throughout the entire cycle. Individual temperature calibrations can be made by a trained service technician.

If temperature sensor failure occurs, the alarm sounds and a message is printed.

Water level sensors monitor water level of the chamber sump. If water level sensor failure occurs, the alarm sounds and a message is printed.

Printer board has a 24-column, alphanumeric printer which produces characters within a 5.0 x 7.0 dot matrix on 2-1/3" (60 mm) wide, single-ply thermal paper. Printer is controlled by a dedicated microcomputer.

Print speed is approximately 48 lines per minute. Paper tape exits from an opening flush with the surface of the control panel, and is taken up automatically by an idler spool mounted above the main printer assembly.

Five paper tape rolls are included with each unit.

SAFETY FEATURES

Vertical chamber door is equipped with a **safety switch** to prevent the door from closing quickly in case of system failure.

The washer/disinfector is equipped with a **safety lockout feature** so a cycle cannot start unless the door is fully closed. If the door is opened during a cycle, all utility services to chamber are shut off, and the cycle stops.

Door interlock feature is provided to prevent cross-contamination. Door interlock feature allows only one door to be opened at a time whenever power is on. When the cycle is in process, door interlock prevents either door from being opened without first pressing the STOP/RESET touch pad. Access to the load is then restricted.

Two **emergency stop pushbuttons**, one on the load and one on the unload side, automatically stop all unit operation when pressed.

Building electrical supply disconnect switch must be used to shut off power to the unit before servicing.

OPTIONAL FEATURES

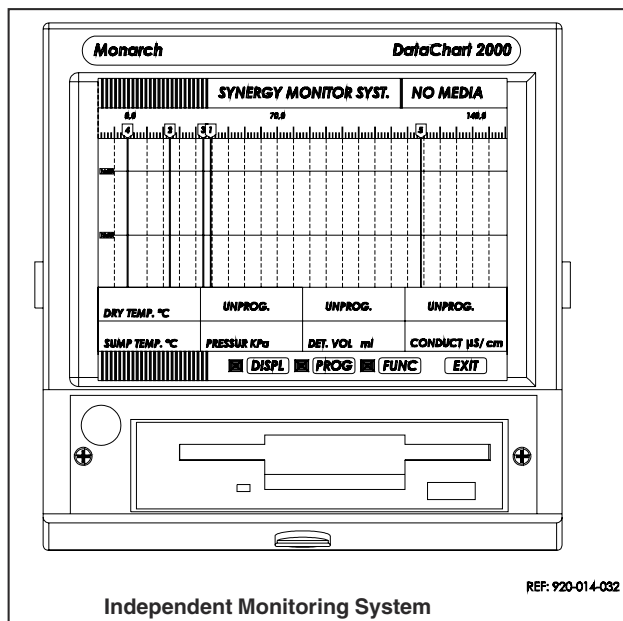
Independent Monitoring System

The Reliance Synergy Washer/Disinfector can be fitted with an optional independent monitoring system. This system documents that parameters of the sump and drying temperature, pump outlet pressure, volume of detergent injected for pumps one to four and pure water supply conductivity are within the validated range during all Wash phases. The monitoring captures data on a floppy disk for up to five days of operation. Companion software is provided with all units to facilitate data transfer into a computer for further analysis.

A link is established between the independent monitoring and the control to ease data interpretation captured by the independent monitor. The control will generate alarms if data recorded independently is out of the set-point range. This raises the level of confidence that the cycle has been successfully completed.

Non-Vented System

Chamber vapors are exhausted through a condenser to the room. No additional duct work is required.



ACCESSORIES*

Fast Cycles for Instruments and Utensils

ADVISORY NOTE: This option is available as a Field Installation on units starting with S/N 3600104000.

STERIS has created two innovative and optimized cycles: FAST INSTRUMENTS and FAST UTENSILS, which provide shorter time cycles at a lower operational cost.

These optimized cycles, which obtain an Intermediate-Level Disinfection claim (6-log reduction of a mixed vegetative organisms and 3-log reduction of Mycobacterium species), are achieved by using specific STERIS chemicals.

Optimized Cycles using Prolystica® Ultra Concentration Chemicals:

Cycle optimization is achieved by the action of the two specific chemicals. Each Ultra Concentrated product is ten times the concentration of a traditional product. Therefore, ten times less chemical is injected to properly process the cycles.

A flow divider is installed on each chemical injection pump to allow the use of these Ultra Concentration chemicals.

- **FAST INSTRUMENTS (08)** uses Prolystica® Ultra Concentrate Enzymatic Cleaner and Prolystica® Ultra Concentrate Neutral Detergent to process reusable surgical instruments (flow divider required).
- **FAST UTENSILS (09)** uses Prolystica Ultra Concentrate Enzymatic Cleaner and Prolystica Ultra Concentrate Neutral Detergent to process utensils (bedpans, bowls, trays and basins). Flow divider is required.

Remote Air Compressor, complete with automatic tank drain and pressure switch, is available in either 110-115 V or 200-240 V, 50/60 Hz, 1-Phase. Oilless air compressor operates at 69 dB sound level. Wiring at installation not provided by STERIS.

Multi-Voltage Transformer is available for facilities having one of the following voltage supply configurations:

- 240 V, 3-Phase, 3-Wire, 60 Hz, 30 kva.
- 600 V, 3-Phase, 3-Wire, 60 Hz, 30 kva.
- 208 V, 3-Phase, 4-Wire, 60 Hz, 30 kva.

Use multi-voltage transformer in combination with 480 V, 3-Phase, 3-Wire, 60 Hz Steam or Electric Washer.

Drain Discharge Cool Down assures water drained at the end of each phase, from the chamber sump to the building drain system, does not exceed 140°F (60°C). If the water temperature in sump is higher than 140°F (60°C), cold water is automatically added to reduce the temperature of the water discharged into the building drain system.

Steam Condensate Return Cool Down allows for connection of a steam condensate return outlet to the drain when a steam condensate return line is not available in the building. Cold water is also injected in the drain piping when condensate return water temperature is too high. Condensate return cool down will keep the temperature in the drain piping below 140°F (60°C).

Bottom Utility Connections permit easy installation of utilities (if supplied) from the floor.

Remote Control Extensions allow the control to be relocated up to 50' (15 m) away from the washer, and is available on the load or unload side.

Seismic Tie-Down Kit includes a seismic report for proper installing and securing of washer to the building floor. Unit is designed to comply with Seismic Zone 3 and 4 requirements.

INSTALLATION

The washer/disinfector is designed as a fully enclosed cabinet for freestanding or recessed installation. **Clearance between the top of the unit and the ceiling must be at least 14" (356 mm).**

If the system is recessed through one or two barrier walls, stainless-steel barrier flanges are included to provide a finished wall appearance.

Once installed, the system is designed to allow for easy access for maintenance purposes.

Printer control console is located on the right-hand side when facing the load end. Controls can be interchanged to suit specific requirements if ordered as an accessory. If independent monitoring option is present, option must be installed outside the washer.

All configuration modifications are available upon request. Contact STERIS to receive a quotation.

* Refer to SD867 for information on material handling accessories, including the Rigid MIS (Minimal Invasive Surgery) Rack.

PREVENTIVE MAINTENANCE

Customers are encouraged to contact STERIS concerning our annual maintenance program. Under the terms of the program, preventive maintenance, adjustments and replacement of worn parts are provided on a scheduled basis to help ensure optimal equipment performance and help minimize untimely or costly schedule interruptions. STERIS maintains a worldwide staff of well-equipped, factory-trained technicians to provide these services, as well as on-site installation, training and expert repair services. Contact STERIS for details.

NOTES

1. Machine is shipped in one crate (W x H x L): 50 x 94 x 42" (1270 x 2388 x 1067 mm).
2. Customer must assure the washer/disinfector stands on a noncombustible floor (floor should be level).
3. STERIS recommends shutoff valves and vacuum breakers (not provided by STERIS) be installed on service lines, and disconnect switches (with lockout in OFF position; not provided by STERIS) be installed in electric supply lines near the equipment.
4. Pipe sizes shown indicate terminal outlets only. Building service lines (not provided by STERIS) must supply the specified pressures and flow rates.
5. For all ventilation ducting from the washer/disinfector, STERIS recommends installation of a dedicated, corrosion-proof, watertight duct to the exterior of the building, sloped toward the washer/disinfector. A 3" (76 mm) OD flexible duct is recommended.
6. **Minimum ceiling height for removal of doors is 94" (2388 mm).**
7. STERIS recommends illumination of the service area along with providing a convenience outlet for maintenance.

UTILITY REQUIREMENTS

IMPORTANT: Refer to equipment drawing 920-014-025EN for installation details and specifications.

Hot Water

1/2" NPT (or 1/2" BSPT), 15-50 psig (100-350 kPa) dynamic. Hot water must be supplied at 110°F (43°C) minimum, and 150°F (66°C) maximum. Maximum flow rate: 17 U.S. gal/min (65 L/min).

Cold Water

1/2" NPT (or 1/2" BSPT), 30-50 psig (206-345 kPa) dynamic. Cold water must be supplied at 70°F (21°C) maximum. Maximum flow rate: 17 U.S. gal/min (65 L/min).

Pure Water

1/2" NPT (or 1/2" BSPT), 5-50 psig (35-350 kPa) dynamic. Maximum flow rate: 21 U.S. gal/min (80 L/min). Water resistivity: 0.1 megohm/cm. Pure water must be supplied between 70-180°F (21-82°C).

Steam

(Steam Unit Only)

1/2" NPT (or 1/2" BSPT), 30-80 psig (200-550 kPa) dynamic. Maximum static pressure: 90 psig (620 kPa). Maximum flow rate: 300 lbs/h at 80 psi (136 kg/h at 550 kPa).

Condensate Return

(Steam Unit Only)

1/2" NPT (or 1/2" BSPT). Peak flow rate: 0.67 U.S. gal/min (2.5 L/min) with no back pressure.

Air

1/8" NPT (or 1/8" BSPT), 65 static to 125 dynamic psi (448-860 kPa). Maximum flow rate: 1 scfm (0.03 m³/min). Maximum particle size: 40 micron. Maximum particle density 10 mg/m³ and oil concentration: 25 mg/m³. Maximum dewpoint for water content: 45°F (7°C) as per ISO-8573-1.

Ventilation

(Not Required for Non-Vented Washers)

3.0" (76 mm) OD vent connection. Maximum flow rate: 60 scfm (1.7 m³/min).

Drain

1-1/2" NPT CPVC Male Slip (trap and waste lines are not provided by STERIS).

Electrical

(Steam Unit)

208 V, 60 Hz, 3-Phase, 4-Wire, 27 Amps; or 480 V, 60 Hz, 3-Phase, 3-Wire, 12.5 Amps; or 600 V, 60 Hz, 3-Phase, 3-Wire, 12 Amps.

Electrical

(Electric Unit)

480 V, 60 Hz, 3-Phase, 3-Wire, 26.5 Amps; or 600 V, 60 Hz, 3-Phase, 3-Wire, 24 Amps.

Telecommunications Requirements for ProConnect

Response Center

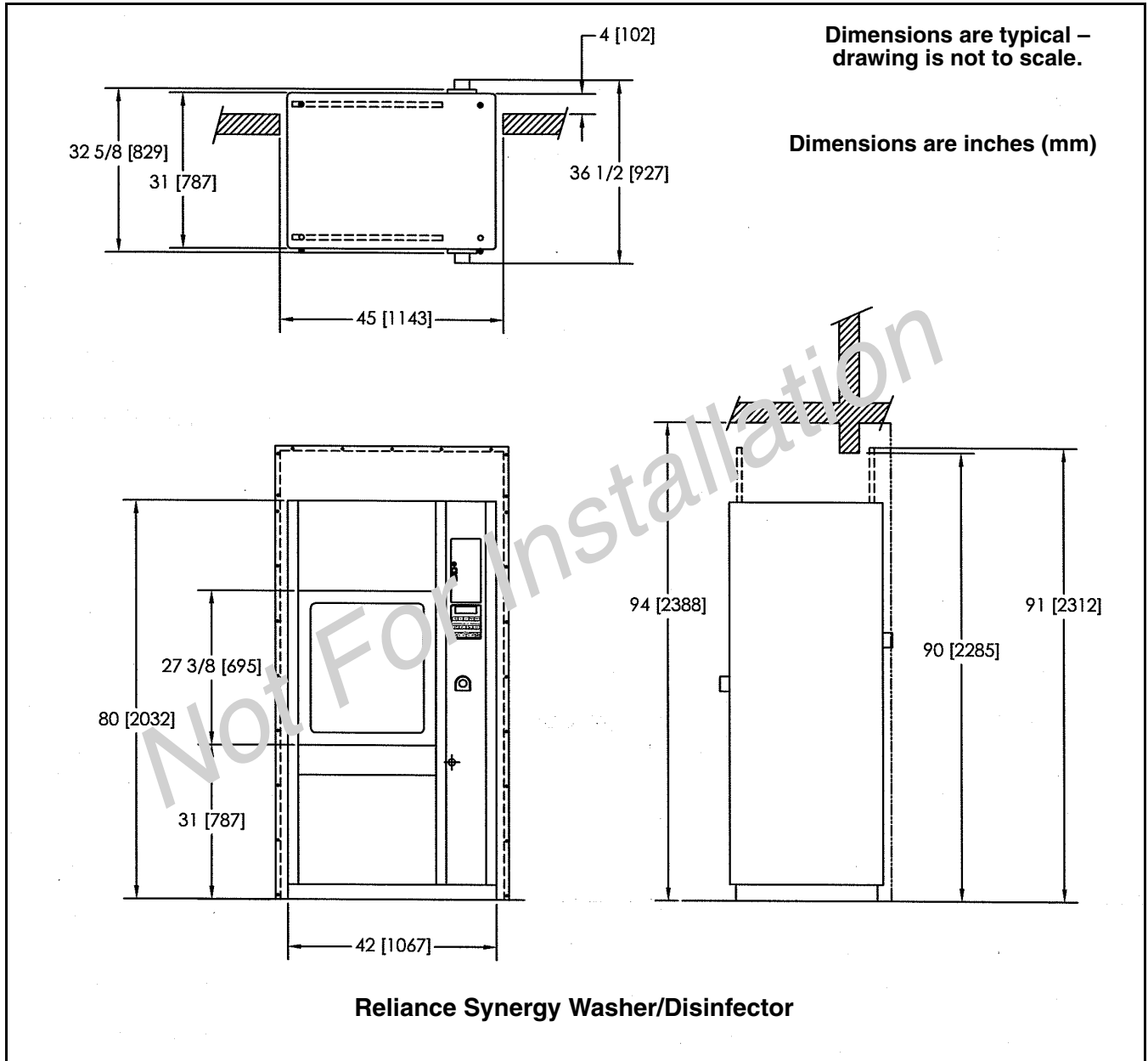
- An active wired or wireless TCP/IP network, 10/100BaseT Ethernet connection at each piece of connected equipment, Internet access and an IP address on the facility network.
- 5 GB of available hard drive space to run the service agent. Can be installed on:
 - » Dedicated PC running Windows XP with 2.8GHz processor, 512MB of RAM
 - » Virtual Machine
 - » Server
- Local STERIS login at the PC with a username of STERIS and the password should be ProConnect (STERIS Customer Number).
- Ethernet cable to connect each piece of STERIS equipment and the dedicated PC to the facility network.

CUSTOMER IS RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND REGULATIONS.

The base language of this document is ENGLISH. Any translations must be made from the base language document.

Reference listed equipment drawing for detailed installation specifications.
 Obtain this drawing from your STERIS Representative.

Equip. Dwg. No.	Equipment Drawing Title
920-014-025EN	Reliance/Hamo Synergy Washer/Disinfector 50 Hz / 60 Hz - English



NOTES

Recommended Air Compressor

1. Enclosure must be well ventilated with a good air path to and from the ends of the compressor.
2. Inlet air temperature should be between 32 and 100°F (0.0 and 38°C). Locate the air inlet outside of the enclosed service areas. Inlet air pipe size is 1/4" (6.0 mm). Increase pipe diameter one size for every 150" (3050 mm) inlet filter is placed away from unit.
3. Use 3/8" (10 mm) pipe (or larger) between the compressor and the washer/disinfector when compressor is remotely located.

4. The air compressor, used in compliance with the Reliance Synergy Washer/Disinfector, can support one loading module and one unloading module (SCS Conveyor System).

UTILITY REQUIREMENTS

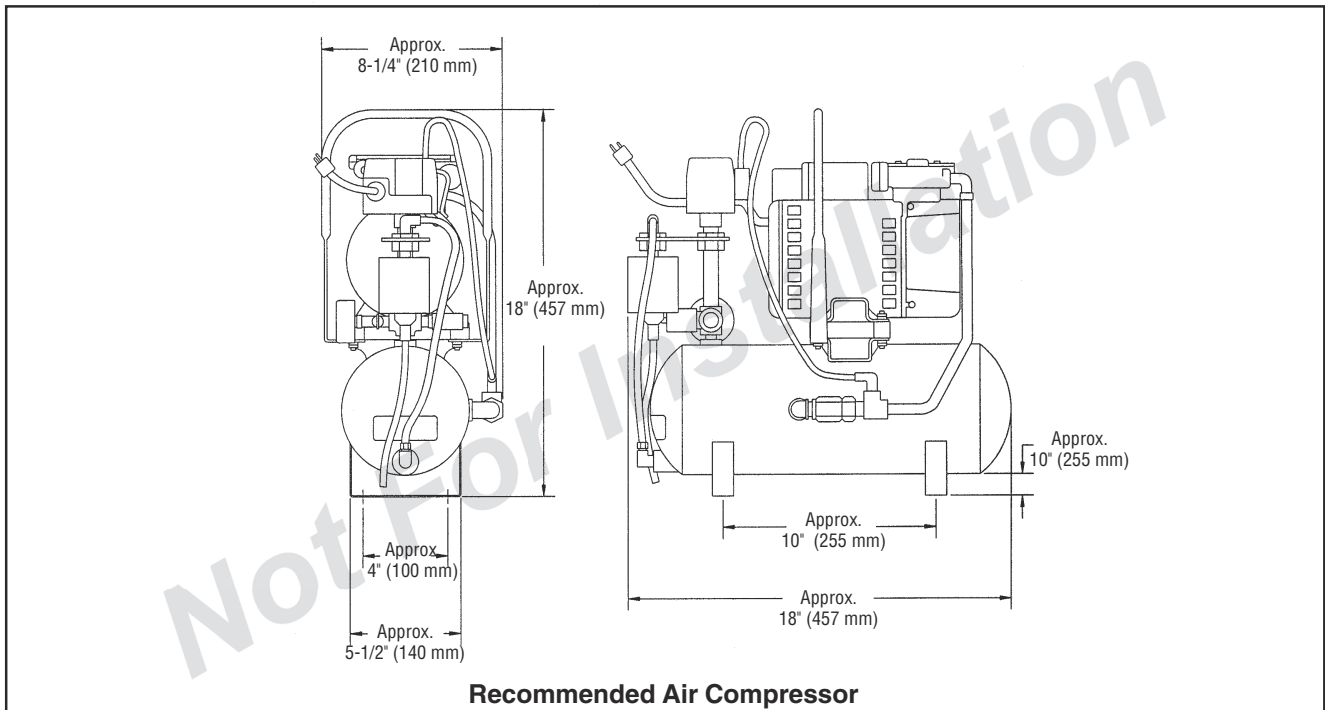
Recommended Air Compressor

Electrical – Compressor Motor

- 110-115 V, 50/60 Hz, 1-Phase, or
- 200-240 V, 50/60 Hz, 1-Phase.

ENGINEERING DATA - RECOMMENDED AIR COMPRESSOR WITH AUTOMATIC TANK DRAIN

CFM Open Flow	Weight lb (kg)	Comp. Stages	Cylinder	LUBRICATION				MOTOR
				Lubrication	Size in (mm)	Capacity ft ³ (L)	Max. Press. psig (kPa)	Operating Speed Hz (rpm)
2	19 (8.6)	1	1	Oilless	See Figure	0.27 (7.6)	100 (690)	50 (1400) 60 (1675)

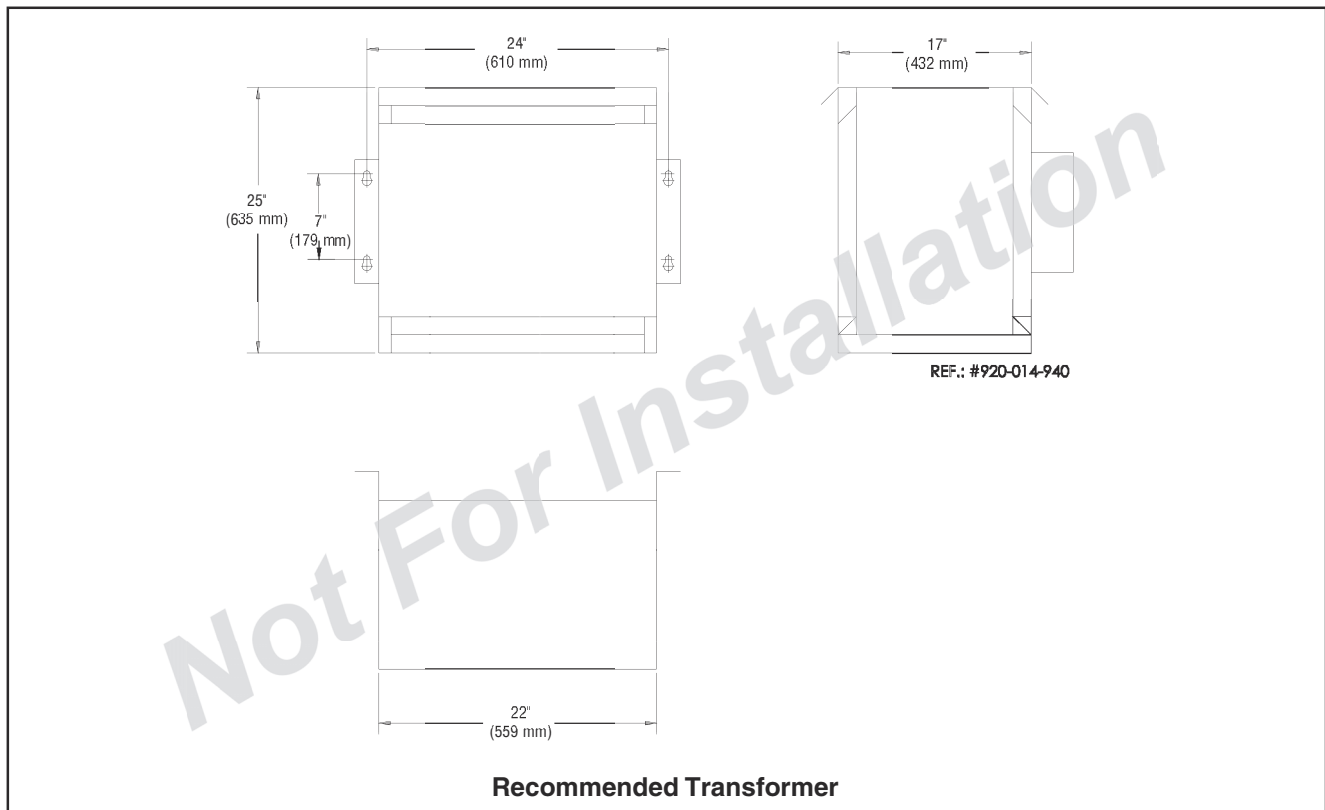


ENGINEERING DATA - RECOMMENDED TRANSFORMER

Power kVA	Input HV V3~, 60 Hz	Output LV V3~, 60 Hz	Weight lbs (kg)	Noise Level dB*	No load loss Watts	Load loss 302°F (150°C) Watts	Total losses Watts
30	208/240/600	480	457 (208)	45	258	608	867

Excitation current %	Installation	Size in (mm)	HV connectors per phase AWG	LV connectors per phase AWG	Temperature Class °F (°C)	Winding (HV) (LV)
3.96	Wall/Floor	see Figure	2-14	2/0-6	428 (220)	Copper

* Calculated as described in ISO-3746 Standard.



Healthcare Capital Equipment

For Further Information, contact:

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