



RELIANCE® VISION® SINGLE-CHAMBER WASHER/DISINFECTOR

APPLICATION

The Reliance Vision Single-Chamber Washer/Disinfector is intended for use in the cleaning and intermediate level disinfection of soiled reusable utensils, trays, glassware, bedpans and urinals, rubber and plastic goods, simple hard-surfaced rigid surgical instruments (such as forceps and clamps), theater shoes and other similar and related items found in healthcare facilities.

DESCRIPTION

The Reliance Single-Chamber Washer/Disinfector is a mechanical washer/disinfector equipped with an Allen-Bradley SoftLogix™ PC-based control system¹. Three chemical injection pumps are included in a standard washer/disinfector with up to two additional chemical injection pumps (accessories) available if desired. The washer is available in a double-door configuration.

The washer/disinfector is designed with five preprogrammed cycles (Instruments, Utensils, Plastic Goods, Gentle Cycle and Ortho.) and one decontamination cycle. The washer/disinfector also features 15 open cycles for customized programming to meet specific operating requirements.

Cycles operate through a combination of the following phases: Pre-Wash, Enzyme, Wash, Rinse, Thermal Rinse and Drying.



(Typical only - some details may vary.)

¹Allen-Bradley SoftLogix™ is a trademark of Rockwell Automation, Inc.

The Selections Checked Below Apply To This Equipment

VOLTAGE*

Steam-Heated Washer/Disinfector

- 200/208 V, Three-Phase, 60 Hz (FH05072)
- 460/480 V, Three-Phase, 60 Hz (FH05042)
- 380/400/415 V, Three-Phase, 50 Hz (FH05062)
- 380/400 V, Three-Phase, 60 Hz (FH05032)

Electric-Heated Washer/Disinfector

- 460/480 V, Three-Phase, 60 Hz (FH05043)
- 380/400/415 V, Three-Phase, 50 Hz (FH05063)
- 380/400 V, Three-Phase, 60 Hz (FH05033)

ACCESSORIES†

- Two-Level Manifold Rack (FD74-800)†
- Three-Level Manifold Rack (FD74-900)†
- Four-Level Manifold Rack [FD75-100]‡ (Height: 22-1/4" [565 mm])†
- Four-Level Manifold Rack [FD75-000]† (Height: 23-3/4" [603 mm])†
- Five-Level Manifold Rack (FD75-200)†
- Multi-Function Rack For Large Items (FD75-500)
- Multi-Function Rack For Small Items (FD75-600)
- da Vinci Rack With USB Memory (FD140)
- da Vinci Rack Without USB Memory (FD162)
- Small Mesh Instrument Tray (247010029H)†
- Flexible Hold-Down Screen (FD75-300)†

ACCESSORIES (CONT'D)†

- Air Compressor, 110 to 115 V
- Transfer Cart (FD21-800)
- Universal Transfer Cart (FD61-700)
- Multi-Voltage Transformer (WA03-34)
- Remote Control Extension, 50' (15 m) Load Side (FD75-400)
- Remote Control Extension, 50' (15 m) Unload Side (FD75-700)
- Side Exterior Panels (FD76-000)
- Condensate Return Cool Down Kit [FD76-100] (For Steam-Heated Washer/Disinfector Only)
- Drain Discharge Cool Down Kit (FD76-200)
- Seismic Tie-Down Kit (FD76-300)
- Upgrade Kit, 180° Unit Rotation (FD77-200)
- Installation Kit, Utility Hose (FD840)
- Ventilation P-Trap (FD841)
- Additional Chemical Pump
 - Pump 3 (For Polystyrene® Ultra Concentrate Chemicals) [FD76-400]
 - Pump 4 (For Other Detergents) [FD76-500]

REMOTE MONITORING

- ProConnect® Technical Support Services (Remote Monitoring, Priority Technical Support, Customer Care Center Access, Equipment Performance Reports) Available Only in U.S. and Canada only. (GP09-166)

OPTIONS

- Language Package
 - French
 - Spanish
- Process Data Validation System (PDVS) [FD00-003-1]
- Control Enhancement System (FD00-003-5)
- Non-Vented System (FD00-003-4)

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

† See separate product literature for material handling accessories.

‡ Only compatible with Vision Single-Chamber Washer/Disinfectors.

Item _____

Location(s) _____

STANDARDS

This Reliance Vision Single-Chamber Washer/Disinfector meets the applicable requirements of the following standards, **as certified by UL:**

- Underwriters Laboratories (UL) Standard UL 61010-1, Second Edition.
- Canadian Standards Association (CSA) CAN/CSA-C22.2 N° 61010-1, Second Edition.
- Canadian Standards Association (CSA) CAN/CSA-Z314.8-08, Third Edition.

Governing Directive for affixing of CE mark:

Medical Device Directive 93/42/EEC as amended by 2007/47/EC.

Standards applied to demonstrate conformity to directives:

EN/IEC 61010-1, Second Edition; EN/IEC 61326-1, 2005; EN/IEC 61010-2-040: Second Edition;

ISO 15883-1* 2006 Washer-Disinfectors - General requirements, terms and definitions and tests;

ISO 15883-2* 2006 Washer-Disinfectors - Requirements and tests for washers-disinfectors employing thermal disinfection for surgical instruments, anaesthetic equipment, bowls, dishes, receivers, utensils, glassware, etc.

* *When the Process Data Validation System (PDVS) or the Control Enhancement System is present.*

SIZE (W x H x L)

Overall dimensions of a fully equipped washer/disinfector:

42 x 80-3/4 x 32" (1067 x 2051 x 813 mm)

Loading height: 31" (787 mm) from the floor

Required ceiling height required: 94" (2388 mm) minimum

FEATURES

Washer is provided with two vertical airtight sliding doors

to facilitate accessory rack or basket entering and exiting the chamber. Doors are automatically operated by pneumatic cylinders. Doors are made of double tempered glass to allow the operator to view the chamber interior with the doors closed and, while the cycle is in progress, to safely touch the door.

The access panels permit easy access to the washer/disinfector components for maintenance purposes.

The printer allows the operator to print process time, date and washer/disinfector malfunction data. Specific information is printed from the Cycle mode (cycle in process parameters and alarms), Service mode (washer/disinfector configuration values and setup) and Supervisor mode (supervisors list and supervisor setup).

Chemical injection pumps (three) are included in the standard washer/disinfector with up to two additional chemical injection pumps (accessories) available if desired. The pumps are located in a separate room and connected to washer/disinfector with up to 50' (15 m) of piping.

Pumps allow the use of the Prolystica Ultra Concentrate chemicals. Each ultra concentrated product is 10 times the

concentration of a traditional product, therefore 10 times less chemical is injected to properly process the cycles.

The peristaltic pumps automatically add a selected quantity of detergent. The pumps give flexibility to wash with a neutral process, an enzyme process, a dual alkaline/enzyme and enzyme/neutralizer process or to vary the chemical used depending upon the load. One pump is dedicated to lubricant or rinse aid to be injected during the Thermal Rinse phase.

Pumps automatically add:

- Ultra Concentrates: 1/40, 3/80, 1/20, 3/40 and 1/10 oz/gal (0.2 to 16 mL/L).
- Regular Chemicals: 1/8, 1/4, 3/8, 1/2, 3/4, 1/10, 1-1/2 and 2 oz/gal (0.2 to 16 mL/L).

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.

The control monitors the volume of chemicals injected and indicates if this parameter meets specified criteria during all specific phases.

An air inlet pre-filter and a High Efficiency Particulate Air (HEPA) filter are located behind upper access panel on unload side of washer/disinfector. Chamber incoming air passes through the HEPA filter to prevent any contamination of the load.

The chamber is constructed of argon-welded 16-gauge #304 stainless steel (No. 4 finish). The chamber is of sanitary-type design for complete drainage. Some horizontal fixed surfaces are sloped, overlapping metal sheets are minimized to reduce hard-to-clean locations, round corners ease the self-cleaning of the sump. The bottom of the chamber is clear of any parts.

The chamber includes a light on the chamber ceiling to illuminate the chamber interior.

A removable debris screen is located in the chamber sump and can be accessed through the chamber load door for maintenance purposes. The debris screen prevents large debris from entering the piping system and pump. The screen is provided with a handle and is easily removed for cleaning under running water.

Rotary spray arm assemblies (two) are located in the chamber (one at the top and one at the bottom) and are positioned to reach all surfaces of the load. These redesigned rotary spray arm assemblies are easily assembled/disassembled and can be accessed through the chamber load door. The Total Coverage spray arm design provides a wider, more uniform area of coverage as compared to standard spray arms.

Stainless-steel pump is an open impeller pump powered by a dual-speed motor to allow two ranges of flow rate/pressure. High pump speed provides the equivalent capacity of an 11.7 hp (8.7 kW) motor and low pump speed provides the equivalent capacity of a 2.95 hp (2.2 kW) motor. Pump motor is a TEFC class H (totally enclosed fan cooled) motor, electro-polished and of sanitary features and is equipped with an overload protection and sealed bearings (not requiring periodic lubrication) with up to 100 psig (689 kPa) at pump outlet. Pump is of 316L stainless-steel construction.

Water Filtration System includes a unique self-cleaning centrifugal filter. After water passes through the sump filter (stopping larger debris and loose instrument parts) it continues through a centrifugal filter (removing smaller debris). This debris does not return to wash chamber or potentially plug spray arm assemblies and is automatically flushed the washer/disinfector between every cycle.

Heating coils (steam or electric) at the bottom of the chamber (sump) raises and maintains water temperature up to 180°F (82°C) during the Wash phase and up to 194°F (90°C) during the Thermal Rinse phase.

Double-walled, insulated construction of chamber exterior reduces heat loss and noise level (as low as 58.2 dB) to the work area.

A vented system is supplied enabling chamber vapors to be exhausted to the building exhaust system through a 3.0" (76 mm) OD vent connection located on top of the washer.

The drying system is a uniquely designed four-sided inflow drying pattern to produce a high-flow air curtain. This air-curtain provides broad, efficient, drying while using a combination of recycled and non-recycled air within wash chamber. Air is manifolded and circulated through the piping and accessory providing an energy efficient system ensuring a complete chamber air coverage. Fresh air is drawn through a HEPA filter. The drying system includes a 3 HP (2.2 kW) blower to remove vapor from chamber prior to the doors opening. Three heater elements totaling 15.8 HP (11.8 kW) heat maintain chamber air temperature.

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

Top utility connections facilitate installation. All utilities (except drain connections) are connected on the top of the washer/disinfector (refer to equipment drawing 920-508-564).

ProConnect Response Center maximizes operational efficiencies with secure, internet-based, real-time equipment monitoring. Data from your equipment is used by STERIS to provide pro-active Customer alert notifications, technical support and predictive maintenance. Online parts ordering, equipment performance dashboards and online service scheduling at steris.com is also available. (ProConnect Technical Support Services is available in U.S. and Canada only.) Refer to Tech Data sheet SD983, *PROCONNECT TECHNICAL SUPPORT SERVICES*, for details.

CYCLE DESCRIPTION

IMPORTANT: *STERIS does not intend, recommend or represent in any way that this Reliance Vision Single-Chamber Washer/Disinfector be used for the terminal disinfection or sterilization of any regulated medical device. The Reliance Vision Single-Chamber Washer/Disinfector is intended only to perform an initial step in the processing of soiled, reusable medical devices. If medical devices are contacting blood or compromised tissues, such devices must be terminally processed in accordance with device manufacturer's instructions and/or Good Hospital Practices before each use in human patients.*

Once cycle is selected, the washer/disinfector automatically processes the load through the following standard phases (when using Prolystica Ultra Concentrate):

- **Pre-Wash phase** – Cold or cold and hot water from building supply fills the chamber. The water is recirculated through the rotary spray arm assemblies for a selected time period. Water is drained upon phase completion. Up to four Pre-Wash phases can be selected per customized cycle.
- **Wash phase** – Cold and/ or hot water from building supply fills the chamber while detergent is automatically added at the beginning of the phase. The phase solution is recirculated through the rotary spray arm assemblies for a selected time period. If heated water is selected, water is heated by a steam or electric coil in the sump. Solution is drained upon phase completion. Up to four Wash phases can be selected per customized cycle.

If the second stage is selected, cold and/ or hot water from building supply fills the chamber at phase beginning. Load is washed for a selected time period (factory setting) with enzymatic cleaner-injected heated water (factory setting). After the selected time period, neutral detergent is injected while injected water is heated (factory-setting). Then, load is washed for a selected time period with both chemicals. Solution is drained upon completion. Up to four Wash phases can be selected per customized cycle.
- **Rinse phase** – Hot or pure water from building supply fills the chamber. The phase solution is recirculated through the rotary spray arm assemblies for a selected time period to rinse load and to cool chamber. Solution is drained upon completion. Up to four Rinse phases can be selected per customized cycle.
- **Thermal Rinse phase** – Hot or pure water from building supply fills the chamber. If needed, instrument lubricant or rinse aid is automatically added during the filling at phase beginning. This solution is recirculated through the rotary spray arm assemblies for a selected time period. Water is heated by a steam or electric coil in the sump. Water can be heated from 180 to 194°F (82.2 to 90°C). Solution is drained upon completion. Only one Thermal Rinse phase can be selected per customized cycle.
- **Drying phase** – Air is recirculated through the accessories and the chamber while a portion is exhausted to the vent for a selected time period. Air is also directed through manifolded racks for fast drying. Air can be heated at the LOW setpoint (180°F [82.2°C]) or at the HIGH setpoint (220°F [104.4°C]).

SAFETY FEATURES

Doors are equipped with a **door interlock safety mechanism** that prevents load side doors from opening at the same time as the unload side door to avoid cross-contamination. When a cycle is in progress, the **door interlock mechanism** prevents either door from being opened without aborting the cycle.

Chamber doors are equipped with an **obstruction sensor** to detect any door obstruction. If an obstruction is present, door automatically opens.

OPTIONAL FEATURES

Non-Vented System – Chamber vapors are exhausted through a condenser to the room. No additional duct work is required.

Control Enhancement System – Reliance Vision Single-Chamber Washer/Disinfector can be fitted with an optional Control Enhancement System. This system monitors parameters of sump and drying temperature and indicates if parameters are within passing criteria during all specific phases.

The control generates alarms if data recorded independently is out of the passing criteria. This raises the level of confidence that the cycle has been successfully completed within predetermined parameters.

Process Data Validation System (PDVS) – Reliance Vision Single-Chamber Washer/Disinfector can be fitted with an optional PDVS. This system documents and measures the parameters of the sump and drying temperature, the pump outlet pressure and the pure water supply conductivity (measured directly to the drain) to help ensure the parameters are within the passing criteria during all specific phases.

The control generates alarms if data recorded independently is outside the range of the passing criteria. This raises the level of confidence that the cycle has been successfully completed within predetermined parameters.

ACCESSORIES

Air compressor, complete with automatic tank drain and pressure switch, operates on 110-115 V, 50/60 Hz, single-phase. Oilless air compressor operates at 69 dB sound level. Wiring at installation not provided by STERIS.

IMPORTANT: Refer to equipment drawing 920-005-138 for installation configuration with washer/disinfector and SCS Conveyor System.

Multi-voltage transformer is available for facilities requiring the following configurations:

- 600 V, three-phase, 60 Hz, steam or electric-heated;
- 240 V, three-phase, 60 Hz, steam or electric-heated;
- 200/208 V, three-phase, 60 Hz, electric-heated.

Use the multi-voltage transformer combined with a 480 V, three-phase, 60 Hz, steam or electric-heated washer/disinfector.

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

NOTE: This accessory can add up to 120 seconds to the standard drain time.

Condensate return cool down allows for connection of a condensate return outlet to drain when condensate return line is not available in building. Cold water is always injected in drain piping when condensate is sent to drain line (or whenever steam valve is open). Condensate return cool down keeps temperature in drain piping below 140°F (60°C).

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

Seismic anchorage system includes a seismic report for proper installing and securing of washer/disinfector to the building floor. Washer/disinfector is designed to comply with Seismic Zone 3 and 4 requirements.

Flexible hose for cannulated instruments provides easy access to flush up to four lumen devices per level (except top level) on the Vision Single Chamber racks except for the Five-Level rack that is supplied with two lumens per level (and none on top level). This accessory can be added and removed to meet user requirements.

Flexible hold-down screens (easy to use silicone hold-down accessories) are used in conjunction with Multi-Function rack for small items.

180° unit rotation upgrade kit helps unit fit most space configurations and permits easier access to touch screens when unit is equipped with SCS Conveyor System.

Vision multi-function racks:

- For Small Items; is designed to hold small basins, small bowls, light handles, glass cups, etc. Rack can be placed on any level of the two- or three-level Vision Manifold rack.
- For Large Items; is designed to hold trays, basins, bowls, theatre shoes, baby bottles, bedpans, etc. Rack can be placed on lower level of the two-level Vision Manifold rack.

CONTROL SYSTEM

The user friendly PC control provides immediate feedback on all wash cycle critical parameters (including time, temperature, chemical injection and spray arm rotation [option required]). The Allen-Bradley SoftLogix™ PC-based control system¹ monitors and controls washer/disinfector operations and functions while also monitoring washer/disinfector current status (including current chamber temperature and time remaining in phase).

Control system offers four operation modes: Ready, Cycle, Supervisor and Service. Supervisor and Service modes are password protected while Ready and Cycle modes are always available.

¹ Allen-Bradley SoftLogix™ is a trademark of Rockwell Automation, Inc.

Washer/disinfector is equipped with two control system touch screens: one on load side and other on unload side. Identical information is displayed on both touch screens. These screens are touch-sensitive color graphics screens. Operator can only silence buzzer and open or close unload door using unload side touch screen. Other actions are performed using load side touch screen.

An audible warning system is provided to alert the operator when necessary.

Each cycle program is operator adjustable to meet specific processing needs. Cycle programming is protected by security access code set by supervisor.

Control system features preprogrammed temperature ranges for each cycle. If operator selects an out-of-range temperature setting when modifying cycle values, control system alerts operator with a message and halts further operation until correct value is entered.

CONTROL VALUE SETTINGS

Supervisor-adjustable control settings:

- **Supervisor management** – configures the Supervisor name and password.
- **Cycle management** – edits cycle name and cycle parameter and also allows cycle selection.
- **Cycle description** – changes the name, icon and description of the current selected cycle.
- **Parameters** – changes the different cycle parameters.
- **Setup** – adjusts the washer/disinfector setup options.
- **Time set** – sets current time of day for displays and printouts.
- **Date set** – sets current date for displays/printouts.
- **Printer enabled** – enables the printer.
- **Hospital name** – modifies hospital name.
- **Department name** – modifies department name.
- **Chemical pump name** – modifies the name of all chemical pumps.
- **Temperature/pressure units** – selects the temperature unit as well as pressure units.
- **Control enhancement system (option)** – modifies control enhancement system parameters.
- **PDVS (option)** – modifies PDVS parameters.

INSTALLATION

The Reliance Vision Single-Chamber Washer/Disinfector is designed to be a freestanding unit. The minimum clearance between the finished floor and the ceiling is 94" (2388 mm). Once installed, the washer/disinfector is designed for easy access for maintenance purposes.

PREVENTIVE MAINTENANCE

Customers are encouraged to contact STERIS concerning annual maintenance programs. Under the terms of these programs, 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. Customers must ensure the washer/disinfector stands on a level, noncombustible floor.
2. STERIS recommends shutoff valves and vacuum breakers (not provided by STERIS) be installed on service lines.
3. STERIS recommends the illumination of the service area along with providing a convenience outlet for maintenance.
4. Clearances shown are minimal for installing and servicing the washer/disinfector.
5. Always follow local electrical codes and safety-related work practices for wiring.

UTILITY REQUIREMENTS

Important: Refer to equipment drawing 920-508-564 for details.

Hot Water

1/2" NPT

Cold Water

1/2" NPT

Steam

1/2" NPT

Air

1/8" NPT

Ventilation

3" (76 mm) O.D.

Drain

Recommended minimum 4" (101 mm) floor sink with minimum 1-1/2" (38 mm) drain outlet.

Pure Water

1/2" NPT

Condensate Return

1/2" NPT

Electricity, Steam Heated Units

- » 200-208 V, 50-60 Hz, 3-Phase, 36 Amps
- » 460-480 V, 60 Hz, 3-Phase, 17 Amps
- » 380-400 V, 60 Hz, 3-Phase, 18.5 Amps
- » 380-415 V, 50 Hz, 3-Phase, 20 Amps

Electricity, Electric Heated Units

- » 460-480 V, 60 Hz, 3-Phase, 30 Amps
- » 380-400 V, 60 Hz, 3-Phase, 33.2 Amps
- » 380-415 V, 50 Hz, 3-Phase, 32 Amps

Requirements for ProConnect Technical Support Services:

Refer to Tech Data sheet SD983, *PROCONNECT TECHNICAL SUPPORT SERVICES*. (Available in U.S. and Canada only.)

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

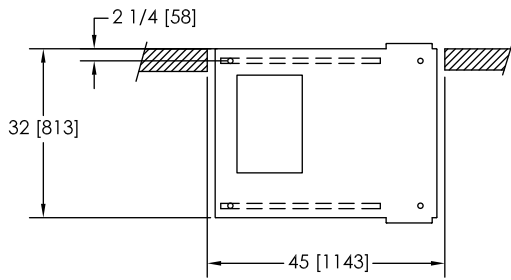
The base language of this document is ENGLISH. Any translations must be made from the base language document.

Refer to the Following Equipment Drawing for Installation Details

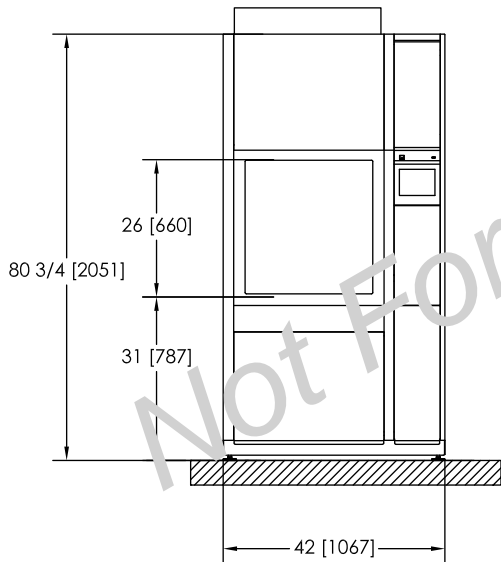
Equipment Drawing Part Number	Equipment Drawing Title
920-508-564	Reliance® Hamo® Vision® Single Chamber Washer/Disinfector

Dimensions are typical - drawing is not to scale.

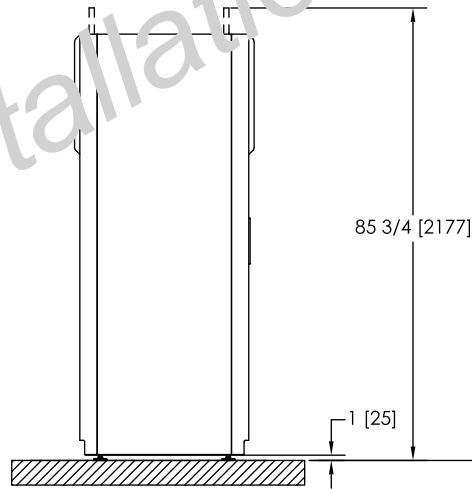
Dimensions are inches (mm)



Top View



Front View



Side View

Not For Installation

For Further Information, contact:



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