STERIS®

AMSCO® 5052 SINGLE-CHAMBER WASHER/DISINFECTOR

APPLICATION

The AMSCO 5052 Single-Chamber Washer/Disinfector with touch screen control is intended for use in the cleaning and intermediate-level disinfection of soiled reusable utensils, trays, 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 AMSCO 5052 Single-Chamber Washer/Disinfector is a cabinet-type mechanical washer that includes:

- Color touch screen microprocessor control system
- Audible warning system
- Space saving, power vertical sliding doors
- Eight factory-loaded cycles. Each cycle effective, fast and energy efficient. Each cycle may be customized (within allowed range of parameters) to meet specific operating requirements
- Chamber illumination by long-life, energy-efficient LED light
- Compact space saving footprint
- Conforms to seismic building code requirements.

Size (W x H x L):

Exterior dimensions:

- 42 x 80 x 31" (1067 x 2032 x 787 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

(Typical - details may vary.)

STANDARDS

The AMSCO 5052 Single-Chamber Washer/Disinfector complies with the following standards:

Governing Directive for the affixing of the CE mark:

- Medical Devices Directive 2007/47/EC as amended by 93/42/EEC
- Machinery Directive 2006/42/EC
- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC - Class A, Group 1 ISM Equipment

Standards Applied to Meet Performance Requirements and Safety:

- ISO 15883-1:2006, ANSI/AAMI ST15883-1:2009 and CAN/CSA Z15883-1:2009
- ISO 15883-2:2006, ANSI/AAMI ST15883-2: 2013 and CAN/CSA-Z15883-2:2009
- IEC/EN 61010-2-040 and CAN/CSA-C22.2 No. 61010-2-040, 1st Edition
- UL 61010-1, IEC/EN 61010-1 and CAN/CSA-C22.2 No. 61010-1, Second Edition

The Selections Checked Below Apply To This Equipment

POWER*
- ❑ Steam-Heated Unit
- ❑ Electric-Heated Unit

VOLTAGE*

Steam Heated Units
- ❑ 200 to 208 V, 60 Hz
- ❑ 380 to 400 V, 60 Hz
- ❑ 380 to 415 V, 50 Hz
- ❑ 460 to 480 V, 60 Hz

Electric Heated Units
- ❑ 380 to 400 V, 60 Hz
- ❑ 380 to 415 V, 50 Hz
- ❑ 460 to 480 V, 60 Hz

ACCESSORIES†
- ❑ Impact Printer (FD094)
- ❑ Seismic Tie-Down Kit (FD085)
- ❑ Condensate Return To Drain (FD084) (for Steam-Heated Units Only)
- ❑ Bottom Utility Connections – Steam (FD086)
- ❑ Bottom Utility Connections – Electric (FD061)
- ❑ Sampling Valve (FD089)
- ❑ Additional Chemical Pump (FD168): ❑ One Pump ❑ Two Pumps
- ❑ Installation Kit – Steam (FD088)
- ❑ Installation Kit – Electric (FD037)
- ❑ IQ-OQ-PQ Protocols (FD592)
- ❑ Air Compressor, 110 to 115 V

ACCESSORIES (CONT'D)†
- ❑ Language Package:
  - ❑ French (FD090)
  - ❑ Spanish (FD091)
  - ❑ German (FD092)
  - ❑ Italian (FD093

* *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)_____

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STANDARD FEATURES

Vertical sliding power door:

- Constructed of double pane tempered glass to allow operator to view chamber interior with door closed.
- While cycle is in progress, glass door remains cool to touch.
- Door is pneumatically activated using touch screens located on the control panel (one each side of unit) and is equipped with a built-in safety system.
- Each door is mounted on a compressed seal that reduces heat loss and increases heating capability.
- If a power failure occurs, door 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 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 equivalent capacity of a 2 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 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**.

Wash chamber:

- Constructed of 16-gauge, #304 L stainless steel (No. 4 finish), argon-welded and polished.
- Chamber is of sanitary-type design (horizontal fixed surfaces are sloped, overlapping metal sheets) for complete drainability and to reduce hard-to-clean locations.
- **Single-walled, insulated construction** of chamber exterior reduces heat loss and noise level to the work area.
- **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 load surfaces. Spray assemblies are easily removable without tools to aid in cleaning and maintenance.
- Depending on type of rack accessory in chamber, manifold connector automatically connects to accessory at start of each cycle.
- **3-W LED light,** mounted within an explosion/vapor-proof enclosure, illuminates chamber interior.

Sump:

- Constructed of #304 L stainless steel with 9.5 gal (36 L) capacity.
- **Removable stainless-steel filter** in chamber sump prevents debris from entering pump and piping system.
- **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 194°F (90°C) during the Thermal Rinse phase.

Chemical injection pumps:

- Pumps are optimized to use Prolystica® Ultra Concentrate chemicals. Each ultra concentrated product is 10 times more concentrated than equivalent traditional product; so, 10 times less chemical is injected per cycle.
- The Washer/Disinfector comes with one enzyme and one detergent injection peristaltic pump which automatically add a selected quantity of chemical from 1/40 to 2 oz/gal (0.2 to 16 mL/L).
- Pumps give flexibility to dual wash combining PUC enzyme and PUC detergent.
- One injection peristaltic pump is dedicated to automatically add a selected quantity of lubricant during Thermal Rinse phase.
- If desired, up to two additional chemical pumps can be installed, giving flexibility to wash with a neutral process, an alkaline process, or to vary chemical used, depending on load type.
- Pumps are positioned near chemical containers. 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.
- 100' (30 m) extension tubes are included to pump chemicals from canisters installed in a remote location to the washer/disinfector.
- Control monitors volume of chemicals injected and indicates if this parameter meets specified criteria during all specific phases.

Microprocessor control system is equipped with a touch screen Customer interface. This 5.7" (145 mm) color touch screen is mounted at eye level beside chamber door (both sides of unit) and tilted for better visibility, allowing easy monitoring of all wash cycles. Control system monitors and controls all phases of each programmed cycle.

The microprocessor control system features:

- Locking program cycle parameters with access code.
- Service mode for preventive maintenance testing and to facilitate troubleshooting.
- Built-in service diagnostic program to permit system calibration and verification of component operations.
- Security lock-out feature that enables programs and temperatures to be locked and unchangeable without the proper access code.
- Cycle data is stored as a protection against power disruption.
- Permits operator to monitor current washer/disinfector status (including current chamber temperature and time remaining in phase).
- Indicates any abnormal conditions (alarm).
- Equipped with audible warning system.

Technical Control Data:

- Control system consists of two microcomputer printed circuit boards located within washer/disinfector.

- Control system backs-up all cycle memory for up to 10 years. If power failure occurs during cycle, control battery backup system verifies that cycle memory is retained.
- **Resistive Temperature Detectors** (RTDs) sense temperature inside chamber. These signals, converted into electrical impulses, provide accurate control inputs and readouts throughout entire cycle. Individual temperature calibrations can be made by a trained service technician. If temperature sensor failure occurs, alarm sounds and message is printed.
- **Water level sensors** monitor water level of chamber sump. If water level sensor failure occurs, alarm sounds and message is printed.

Top utility connections (except drain connections) facilitate installation. All utilities (including vent, steam, electric, water and compressed air) 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.

Front service panels. Piping, valves, electrical components and wiring are easily accessible through front access panels. Service from side of unit is not required.

System Drying. Drying system is manifolded and circulates HEPA-filtered air through piping, accessories and chamber for 1 to 60 minutes at low temperature (180°F [82°C]), or 1 to 30 minutes at high temperature (240°F [115°C]). System includes a cold water condenser. Drying system includes a 3 hp (2.2 kW), blower and three electric heaters totalling 11.4 kW. System heats and maintains chamber to 180-240°F (82-115°C). No additional duct work is required.

Vented or Non-Vented Configuration. If ductwork is available (Vented Configuration), chamber vapors are exhausted to building exhaust system through a 3.0" (76 mm) OD vent connection located on top of chamber. If ductwork is not available (Non-Vented Configuration), washer/disinfector includes a cold water condenser which can be activated on site. Chamber vapors are exhausted through this condenser to facility room.

Pure Water Rinse Supply. Washer/Disinfector is equipped with Pure Water Stainless-Steel Supply Valve. Pure water from facility is sprayed over load under pump pressure for 15 seconds (adjustable from 15 seconds to 15 minutes). Up to four Pure Water Rinse treatments can be selected per cycle with recirculated water. Pure water can also be used for thermal disinfection stage and is heated to 194°F (90°C) using either steam or electric heaters.

Drain Discharge Cool Down. This feature 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.

Barrier Wall Flange Kit consists of four 3-1/2" (89 mm) stainless-steel side flanges and two stainless-steel top flanges to seal opening between washer/disinfector and wall (on both sides).

CYCLE DESCRIPTION

ADVISORY NOTE: *STERIS does not intend, recommend or represent in any way that this AMSCO 5052 Single-Chamber Washer/Disinfector be used for the terminal disinfection or sterilization of any regulated medical device. AMSCO 5052 Washers/Disinfectors are intended only to perform an initial step in the processing of soiled, reusable medical devices. If medical devices contact blood or compromised tissues, such devices must be terminally processed in accordance with good hospital practices before each use in human patients.*

Once treatment cycle is selected, washer/disinfector automatically processes load through standard phases (additional phases are included in certain treatment cycles depending on unit configuration) as described on Cycle Charts and in supplied Operator Manual.

AMSCO 5052 Single-Chamber Washer/Disinfector enables Customers to use Dual Wash phase combining PUC enzyme and PUC detergent in the same filling which accelerates cycle time and reduces water consumption.

SAFETY FEATURES

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

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. Access to the load is then restricted.

Safety stop pushbutton(s), 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.

ACCESSORIES*

Impact Printer (FD094), if provided, produces an easy-to-read printed record of whether load was properly processed at the preset temperature, as well as a complete list of the alarm and abort in-cycle messages. A paper out LED is included.

Steam Condensate Return To Drain (FD084) 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 keeps the temperature in the drain piping below 140°F (60°C).

Bottom Utility Connections, Steam (FD086) or Electric (FD061) permit easy installation of utilities (if supplied) from the floor. Kit includes flexible hoses and shut-off valves for utilities.

Seismic Tie-Down Kit (FD085) includes seismic report for proper installing and securing of washer to building floor. Unit is designed to comply with Seismic Zone 3 and 4 requirements.

Additional Chemical Pump (FD168) – one or two are available – is optimized to use Prolystica Ultra Concentrate chemicals and is provided with 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.

Sampling Valve (FD089) is supplied in washer/disinfector recirculation piping for Customers that are not able to install sampling valves on facility supply lines near washer/disinfector. All water supply samples can be obtained at this unique valve.

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 and installation not provided by STERIS.
Important: *Refer to equipment drawing 920005138 for installation configuration with washer and SCS Conveyor System.*

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

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.

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

NOTE: Washer/Disinfector is designed to enable 180° (or reverse) installation. No additional equipment is needed. A simple software parameter change to the unit flow made at the controller during installation is all that is required. Also, if Customer wishes, the printer may be easily moved for better usage.

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. Customer must provide utility connections with shutoff disconnects within 2' (0.6 m) of equipment perimeter and below ceiling deck or purchase Installation Kit from STERIS.
4. STERIS recommends 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 equipment.
5. For all ventilation ducting from the washer/disinfector, STERIS recommends installation of a dedicated, corrosion-proof, flexible watertight duct (3" [76 mm] OD) to the exterior of the building, sloped toward the washer/disinfector.
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 10061601 for installation details and specifications.*

Hot, Cold and Pure Water; Steam; Condensate Return
1/2" NPT

Air: 1/8" NPT

Ventilation: 3" (76 mm) O.D.

Drain
Recommended minimum 4" (102 mm) floor drain. A 8 x 8" (204 x 204 mm) floor sink is also recommended.

Electricity (Steam Heated Units)
- 200-208 V, 60 Hz, 3-Phase, 22.2 A
- 380-400 V, 60 Hz, 3-Phase, 11.2 A
- 380-415 V, 50 Hz, 3-Phase, 10.6 A
- 460-480 V, 60 Hz, 3-Phase, 9.8 A

Electricity (Electric Heated Units)
- 380-400 V, 60 Hz, 3-Phase, 29.8 A
- 380-415 V, 50 Hz, 3-Phase, 24.9 A
- 460-480 V, 60 Hz, 3-Phase, 24 A

For Further Information, contact:

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