



# Consolidated Sterilizers

*Designed to Transform Your Laboratory*

## Featuring the ADV Advantage™ Series Sterilizer Control Suite

Programmable Logic Controllers (PLC)



*Model PT-SR-24A-ADVPRO  
shown with optional stainless steel loading cart and  
interior chamber tracks to simplify loading and unloading.*



**CONSOLIDATED  
STILLS & STERILIZERS**

CONSOLIDATED MACHINE CORPORATION

Featuring Green Technology  for Energy Savings and Minimal Environmental Impact



## ADV-Series Sterilizer Controllers Now Available for all Consolidated Rectangular Chamber Sterilizers

### Built from Industry Standard Open Source Components

Consolidated's *Advantage Series™* Programmable Logic Controllers are built using proven industry standard components that provide dependable performance, solid reliability, and international parts availability.

- Based on the proven Allen Bradley PLC configured specifically for Consolidated Sterilizers
- Intuitive Rockwell touch screens and real-time operating system
- UL/CSA listed

### Permits Industry Standard and Custom Sterilizer Cycles

The ADV-PRO controller comes with many pre-programmed common sterilizer cycles, each tuned to best sterilize a specific type of load. Additionally, users may program custom cycles tailored to specific applications. Some standard factory configured cycles are:

- Gravity
- Fluid
- Vacuum
- Bowie-Dick (daily air removal test)
- Vacuum leak test
- Low temperature
- Air-over-pressure
- Effluent decontamination
- Other programmable cycles (up to 20 total)

### Intuitive Operator Interfaces

The ADV-PRO controller combines a monitor, keyboard and mouse into one robust, durable, and convenient touch screen interface with several mounting options:

- Standard: 6" (15.24 cm) color active matrix TFT touch screen resolution: 320 X 240 pixels, 18-Bit color graphics
- Standard: Chamber process gauges display pressure (Psig, kg/cm<sup>2</sup>) and vacuum (inHg and mmHg)
- Optional: 10" (25.4 cm) color active matrix TFT touch screen resolution: 640 X 480 pixels, 18-Bit color graphics
- Optional: Available with swing-arm, front panel and remote panel mounting
- Optional: dual-control display available for pass-thru models
- Optional: dual-control remote cycle start switch available for pass-thru models



*Consolidated Sterilizer Controller ADV-PRO is configured for Consolidated products. It utilizes the proven Allen Bradley PLC which is an open source controller with worldwide support.*

### Sterilizer Control and Process Integrity

Advanced software-based control and hardware-based monitoring allow unattended operation of Consolidated Sterilizers without sacrificing reliability. Standard security features prevent inadvertent or unauthorized process changes.

- Touch screen configurable cycle parameters
- Incorrect or out-of-tolerance parameter rejection
- Two-point software calibration of sensor circuits
- Multi-layered password security for configuration protection
- Cycle start interlock requires sterilizer doors to be closed and locked
- Automatic condensate exhaust management for all sterilizer cycles
- Optional memory back-up preserves configuration in event of power failure/outage
- Optional fully-integrated supervisory control and data acquisition (SCADA) system
- Double door alarm for pass-thru models
- Energy-saving auto-jacket control (sleep mode)

### Sterilizer Cycle Quality Reporting

Users can easily view, and electronically download all sterilizer operating parameters, cycle progress, and cycle data for a single load or batch of loads.

- Data downloadable via Ethernet, RS-232 or RS-485 interfaces
- Ongoing graphical display of cycle progress on touch screen display
- Hard copy report from thermal or impact printer (48 characters/line)
- Optional fully-integrated supervisory control and data acquisition (SCADA) system available

## Printed Documentation of Sterilizer Cycles

A printed record of each sterilizer cycle provides nonvolatile documentation demonstrating compliance with its specification, suitable for the process record and auditing, and in compliance with 21 CFR requirements.

- User-defined cycle name
- Start time and date
- Cycle type
- Time, chamber temperature and pressure at cycle start, end, transition points and periodically during cycle phases
- Cycle summary, including sterilize time and exhaust time

## Audible and Visual Alarms

At the end of each cycle or upon the occurrence of abnormal sterilization conditions, the *Advantage Series™* Controller displays a visual notification and sounds an audible alarm. A sampling of sterilizer alarms include:

- Cycle completed
- Recycle alarm - proper sterilization temperature not maintained
- Over temperature alarm - sterilization temperature exceeded limit
- Over pressure alarm - sterilization pressure exceeded limit



Pass-thru sterilizer Model PT-SR-24A-ADVPRO, shown with controller mounted on optional swing-away arm, and optional 10" screen.


A field upgrade kit is available for Consolidated sterilizers currently using microprocessor control systems.

## Touch Screen Menu System

The ADV-PRO touch screen layout and menu system is intuitive, easy to use, and requires little operator training. In addition, diagnostic and help resources are available throughout the menu structure.

- Built-in menu system
- Intuitive menu trees and screens
- Multi-layered password security for configuration protection
- Context-sensitive help system
- Built-in service and diagnostic routines
- Optional remote troubleshooting feature available

## Sterilizer Selection Chart

Model	Volume (per chamber)	Interior Dimensions (per chamber / w x h x f-b)	
<b>Single Door Models</b>			
         			
<b>SSR-2A</b>	3.9 cu.ft. 109 liters	16" x 16" x 26"	40.6 x 40.6 x 66.0 cm
<b>SSR-3A</b>	8.8 cu.ft. 249 liters	20" x 20" x 38"	50.8 x 50.8 x 96.5 cm
<b>SR-24A</b>	12.0 cu.ft. 340 liters	24" x 24" x 36"	61.0 x 61.0 x 91.4 cm
<b>SR-24B</b>	16.0 cu.ft. 453 liters	24" x 24" x 48"	61.0 x 61.0 x 122.0 cm
<b>SR-26A</b>	15.25 cu.ft. 340 liters	26" x 26" x 39"	66.0 x 66.0 x 99.0 cm
<b>SR-24C</b>	18.0 cu.ft. 510 liters	24" x 36" x 36"	61.0 x 91.4 x 91.4 cm
<b>SR-28B</b>	21.8 cu.ft. 617 liters	28" x 28" x 48"	71.0 x 71.0 x 122.0 cm
<b>SR-24D</b>	24.0 cu.ft. 680 liters	24" x 36" x 48"	61.0 x 91.4 x 122.0 cm
<b>SR-24E</b>	30 cu.ft. 850 liters	24" x 36" x 60"	61.0 x 91.4 x 152.0 cm
<b>SR-24F</b>	36 cu.ft. 1019 liters	24" x 36" x 72"	61.0 x 91.4 x 183.0 cm
<b>Pass-Thru Models</b>			
         			
<b>PT-SSR-2A</b>	3.9 cu.ft. 109 liters	16" x 16" x 26"	40.6 x 40.6 x 66.0 cm
<b>PT-SSR-3A</b>	8.8 cu.ft. 249 liters	20" x 20" x 38"	50.8 x 50.8 x 96.5 cm
<b>PT-SR-24A</b>	12.0 cu.ft. 340 liters	24" x 24" x 36"	61.0 x 61.0 x 91.4 cm
<b>PT-SR-24B</b>	16.0 cu.ft. 453 liters	24" x 24" x 48"	61.0 x 61.0 x 122.0 cm
<b>PT-SR-26A</b>	15.25 cu.ft. 340 liters	26" x 26" x 39"	66.0 x 66.0 x 99.0 cm
<b>PT-SR-24C</b>	18.0 cu.ft. 510 liters	24" x 36" x 36"	61.0 x 91.4 x 91.4 cm
<b>PT-SR-28B</b>	21.8 cu.ft. 617 liters	28" x 28" x 48"	71.0 x 71.0 x 122.0 cm
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<b>PT-SR-24F</b>	36 cu.ft. 1019 liters	24" x 36" x 72"	61.0 x 91.4 x 183.0 cm
<b>Dual Chamber Tower Models</b>			
 			
<b>2SSR-2A</b>	3.9 cu.ft. 109 liters	16" x 16" x 26"	40.6 x 40.6 x 66.0 cm
<b>2SSR-3A</b>	8.8 cu.ft. 249 liters	20" x 20" x 38"	50.8 x 50.8 x 96.5 cm

## Consolidated Still & Sterilizers - Advantage Series™ Programmable Logic Controller Options

Catalog Number	ADV-PRO	ADV-PLUS	ADV-PB
Description	Color touch screen display	Monochrome touch screen display	Monochrome touch screen display w/ push buttons

### Operator Interfaces

Display	6" - 18 bit Color	10" - 18 bit Color	6" - Monochrome	3" - Monochrome
Resolution	320 x 240 pixels	640 x 480 pixels	320 x 240 pixels	128 x 64 pixels
Mounting Options	Swing-Arm, Front Panel and Remote Panel		Front Panel and Remote Panel	Front Panel and Remote Panel
Chamber Process Gauges	Pressure (Psig, kg/cm <sup>2</sup> ) Vacuum (inHg, mmHg)		Pressure (Psig, kg/cm <sup>2</sup> ) Vacuum (inHg, mmHg)	Pressure (Psig, kg/cm <sup>2</sup> ) Vacuum (inHg, mmHg)
Dual Control Display for Pass-thru Models	Optional			
Remote Cycle Start Switch for Pass-thru Models	Optional		Optional	Optional

### Industry Standard and Custom Sterilizer Cycles

Gravity	Yes		Yes	Yes
Fluid w/Auto Jacket Blowdown	Yes		Yes	Yes
Pre-Vacuum	Optional		Optional	
Post-Vacuum	Optional		Optional	Optional
Low Temperature	Optional		Optional	
Bowie-Dick (Air Removal Test)	Optional			
Vacuum Leak Test	Optional			
Air-Over-Pressure	Optional			
Effluent Decontamination	Optional			
Total Programmable Cycles	Up to 20, maximum		Up to 6, maximum	Up to 2, maximum



### Green Features

Energy Saver Calendar for Scheduled On/Off Steam Supply	Optional		Optional	Optional
Water Eco System for Reduced Water Consumption	Optional		Optional	Optional

### Sterilizer Control and Process Integrity

Configurable Cycle Parameters	Standard		Standard	Standard
Improper Parameter Rejection	Standard		Standard	Standard
Multi-Layered Password Security for Configuration Protection	Standard			
Two Point Calibration of Sensors	Standard		Standard	Standard
Door Interlock to Prevent Inadvertent Cycle Start <sup>1</sup>	Pass-thru Models Only		Pass-thru Models Only	Optional Audible Warning Only
Automatic Condensate Exhaust Management for all Cycles	Standard		Standard	Standard
Memory Backup of Configuration	Standard		Optional	Optional
Fully Integrated SCADA system	Standard		Optional	Optional

### Sterilizer Cycle Quality Reporting

Graphic Display of Cycle Progress	Standard		Standard	Standard
Thermal Printer (48 Chars/line)	Optional		Optional	
Impact Printer (48 Chars/line)	Standard		Standard	Optional
Ethernet	Standard			
RS-232	Optional		Optional	
RS-485	Optional		Optional	
Fully-Integrated SCADA system	Optional		Optional	Optional

### Printed Documentation of Sterilizer Cycles

User Defined Cycle Name	Yes			
Start Time and Date	Yes		Yes	Yes
Cycle Type	Yes		Yes	Yes
Chamber Temperature/Pressures	Yes		Yes	Yes
Cycle Summary	Yes		Yes	Yes

### Audible Alarms (also displayed on touch screen)

Cycle Completed; Recycle Alarm; Over Temperature Alarm; Over Pressure Alarm; Time Limit Alarm; Chamber Drain Alarm; Jacket / Chamber Flow Failure	Standard		Standard	Standard
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<sup>1</sup> Optional audible warning buzzer available; contact Sales for information.  
For information about controllers required for FDA applications contact Consolidated Sterilizers direct.



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