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

Made in the U.S.A.

Featuring Green Technology for Energy Savings and Minimal Environmental Impact

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

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.

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^2) 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

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

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**)
Single Door Models		
SSR-2A	3.9 cu.ft. 109 liters	16" x 16" x 26" 40.6 x 40.6 x 66.0 cm
SSR-3A	8.8 cu.ft. 249 liters	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm
SR-24A	12.0 cu.ft. 340 liters	24" x 24" x 36" 61.0 x 61.0 x 91.4 cm
SR-24B	16.0 cu.ft. 453 liters	24" x 24" x 48" 61.0 x 61.0 x 122.0 cm
SR-26A	15.25 cu.ft. 430 liters	26" x 26" x 39" 66.0 x 66.0 x 99.0 cm
SR-24C	18.0 cu.ft. 510 liters	24" x 36" x 36" 61.0 x 91.4 x 91.4 cm
SR-28B	21.8 cu.ft. 617 liters	28" x 28" x 48" 71.0 x 71.0 x 122.0 cm
SR-24D	24.0 cu.ft. 680 liters	24" x 36" x 48" 61.0 x 91.4 x 122.0 cm
SR-24E	30 cu.ft. 850 liters	24" x 36" x 60" 61.0 x 91.4 x 152.0 cm
SR-24F	36 cu.ft. 1019 liters	24" x 36" x 72" 61.0 x 91.4 x 183.0 cm
Pass-Thru Models		
PT-SSR-2A	3.9 cu.ft. 109 liters	16" x 16" x 26" 40.6 x 40.6 x 66.0 cm
PT-SSR-3A	8.8 cu.ft. 249 liters	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm
PT-SR-24A	12.0 cu.ft. 340 liters	24" x 24" x 36" 61.0 x 61.0 x 91.4 cm
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Dual Chamber Tower Models		
2SSR-2A	3.9 cu.ft. 109 liters	16" x 16" x 26" 40.6 x 40.6 x 66.0 cm
2SSR-3A	8.8 cu.ft. 249 liters	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm

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.

Consolidated Stills & 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^2) Vacuum (inHg, mmHg)		Pressure (Psig, kg/cm^2) Vacuum (inHg, mmHg)	Pressure (Psig, kg/cm^2) 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 [1]	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

[1] 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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