## Midmark M9<sup>®</sup> + M11<sup>®</sup> Steam Sterilizers



Midmark® Steam Sterilizers are designed for intuitive operation and compliance with on-device tutorials, touchscreen prompts, four preset cycles, five custom cycle options and automated cycle documentation. See cycle progress at a glance with a progressing color-coded LED light bar and stay audit ready with sterilization cycle history for the life of the device.



## STANDARD CYCLE PARAMETERS<sup>1</sup>

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Cycle	Cycle	Paramet	ters	Drying	Items to Be Sterilized (Always follow the instrument	M9 Maximum	M11 Maximum
Туре	Temperature Minimum	Time	Pressure Reference <sup>2</sup>	Time <sup>3</sup>	manufacturer's recommendations for sterilization.)	Capacity <sup>5</sup>	Capacity <sup>5</sup>
Wrapped	270°F (132°C)	4 min	27.1 psi (186 kPa)	30 min	<ul> <li>Pouched or wrapped items manufacturers recommend for exposure at 270°F (132°C) for 4 minutes.</li> <li>Wrapped cassettes</li> <li>Dental handpieces (wrapped or not wrapped)</li> </ul>	8.0 lb (3,629 g) or 8 handpieces (2 per tray) with other instruments 8.0 lb (3,629 g) total	9.0 lb (4,082 g) or 8 handpieces (2 per tray) with other instruments 9.0 lb (4,082 g) total
Wrapped 2	275°F (135°C)	3 min	31 psi (214 kPa)	30 min	<ul> <li>Pouched or wrapped items manufacturers recommend for exposure at 275°F (135°C) for 3 minutes</li> <li>Wrapped cassettes</li> <li>Dental handpieces (wrapped or not wrapped)</li> </ul>	8.0 lb (3,629 g) or 8 handpieces (2 per tray) with other instruments 8.0 lb (3,629 g) total	9.0 lb (4,082 g) or 8 handpieces (2 per tray) with other instruments 9.0 lb (4,082 g) total
Delicate	250°F (121°C)	30 min	15 psi (104 kPa)	30 min	<ul> <li>Textiles and surgical packs wrapped for sterilization<sup>4</sup></li> <li>Items, except liquids, manufacturers recommend for exposure at 250°F (121°C) for 30 minutes</li> </ul>	8.0 lb (3,629 g) or 1.3 lb (590 g) textile load	9.0 lb (4,082 g) or 2 packs each at 1.3 lb (590 g) textile load
Unwrapped*	270°F (132°C)	3 min	27.1 psi (186 kPa)	30 min	<ul> <li>Instruments loose on a tray</li> <li>Open glass or metal canisters</li> <li>Tubing not used in surgical procedures (maximum length 40 in and minimum inside diameter 0.187 in)</li> <li>Loose items manufacturers recommend for exposure at 270°F (132°C) for 3 minutes</li> </ul>	8.0 lb (3,629 g)	9.0 lb (4,082 g)
5 Custom Cycles**	250°F (121°C) to 275°F (135°C)	3 min to 45 min	15 psi (104 kPa) to 31 psi (214 kPa)	0 min to 60 min	Instruments with manufacturer instructions outside of Midmark Standard Cycle Parameters     Special applications requiring different programmed cycles	8.0 lb (3,629 g)	9.0 lb (4,082 g)

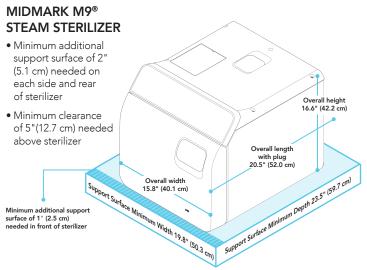
- 1. Standard cycle parameters are taken from the Midmark Steam Sterilizers Setup and User Guide (003-10534-99).
- 2. The pressures shown in this table are at sea level and are for reference only. These are the ideal pressure of saturated steam at the sterilization temperature. The pressures on the sterilizer display may be higher.
- 3. Dry time can be changed from 5 to 60 minutes. (IUSS dry time can be changed from 1 to 5 minutes.) Refer to Standard Cycle Operation in the User Guide.
- 4. Allow a minimum of 1/4 in (6.4 mm) space between each pack and from the chamber wall.
- 5. The default dry time may need increased due to variations in load configuration, wrapping materials and the environment to completely dry the chamber contents at these capacities.

**Note:** Some features can be disabled in Settings, such as the ability to reduce dry time, run an IUSS cycle or run a Custom Cycle. 115 VAC models may be operated in a voltage range of 103-127 VAC. 230 VAC models may be operated in a voltage range of 207-253 VAC. Overall cycle time will vary based on conditions such as voltage, starting temperature and altitude. At the lower end of the voltage range, heat-up times will increase, and it may be necessary to run a Pre-Heat cycle prior to the sterilization cycle.

 $<sup>{}^{\</sup>star}\mathsf{The}$  sterility of unwrapped items is compromised on exposure to a non-sterile environment.

<sup>\*\*</sup>CAUTION: These cycles are not FDA-cleared, and validation of the sterility of items processed using a custom cycle is the responsibility of the user.

Sterilization temperature, drying time and venting procedure can be adjusted or changed to follow instrument manufacturers' instructions when outside of Midmark Standard Cycle Parameters. Refer to Custom Cycle Operation in the User Guide for how to create these cycles.



surface of 1 * (2.5 cm) needed in front of sterilizer	Width 19.8" (50.3 cm) Support Surface Minimum.			
PHYSICAL DIMENSIONS:				
Overall Length with Plug	20.5 in (52.0 cm)			
Overall Width	15.8 in (40.1 cm)			
Overall Height	16.6 in (42.2 cm)			
Support Surface Requirements	19.8 in x 23.5 in (50.3 cm x 59.7 cm)			
Chamber	9 in (diameter) x 15 in (depth) (22.9 cm x 38.1 cm)			
Standard Tray, Large (Usable tray area)	7 5/16 in x 12 in x 7/8 in (18.6 cm x 30.5 cm x 2.2 cm)			
Standard Tray, Small (Usable tray area)	5 5/8 in x 12 in x 7/8 in (14.3 cm x 30.5 cm x 2.2 cm)			
WEIGHTS:				
Weight with Empty Reservoir	82 lb (37.2 kg)			
Weight with Shipping Carton	92 lb (41.7 kg)			
Electrical Rating Note: A separate (dedicated) circuit is recommended for this sterilizer. The sterilizer should not be connected to an electrical circuit with other appliances or equipment unless that circuit is rated for the additional load.				
115 V models	115 VAC, 12 amps, 50/60 Hz			
F	USE RATINGS:			
	F1—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)			
115 VAC	F2—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm			
	F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)			
Safety Valve Setting	43 psi (296 kPa)			
Heat Emission	5275 kJ (5000 BTU) / hr during operation			
Water Reservoir Capacity	4.1 liters (1.1 gallons) to Full mark			

115 V models	115 VAC, 12 amps, 50/60 Hz	
F	USE RATINGS:	
	F1—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)	
115 VAC	F2—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm	
	F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)	
Safety Valve Setting	43 psi (296 kPa)	
Heat Emission	5275 kJ (5000 BTU) / hr during operation	
Water Reservoir Capacity	4.1 liters (1.1 gallons) to Full mark Usable volume is 2.3 liters (0.6 gallons)	
Pollution Degree	II (IEC 60664-1:2020)	
Overvoltage Category	II (IEC 60664-1:2020)	
	M11 STERILIZER ACCESSORIES:	
	<b>120V</b> 9A694001, <b>Auto-fill 230V</b> 9A694002, 03001 and <b>VistaCool™</b> 9A586002	

MIDMARK M11® STEAM STERILIZER		°
Minimum additional support surface of 2" (5.1 cm) needed on each side and rear of sterilizer		Overall height 18.6" (47.2 cm)
Minimum clearance of 5" (12.7 cm) needed above sterilizer	Overall width	Overall length with plug 23.5" (59.7 cm)
Minimum additional support surface of 1" (2.5 cm) needed in front of sterilizer	17.8° (45.2.1 cm)  17.8° (45.2.1 cm)  17.8° (45.2.1 cm)	Support Surface Minimum Depth 26.5° (67.3 cm)

PHYSICAL DIMENSIONS:

Overall Length with Plug	23.5 in (59.7 cm)	
Overall Width	17.8 in (45.2 cm)	
Overall Height	18.6 in (47.2 cm)	
Support Surface Requirements	21.8 in x 26.5 in (55.4 cm x 67.3 cm)	
Chamber	11 in (diameter) x 18 in (depth) (27.9 cm x 45.7 cm)	
Standard Tray, Large (Usable tray area)	9-1/8 in x 15-1/4 in x 7/8 in (23 cm x 38.7 cm x 2.2 cm)	
Standard Tray, Small (Usable tray area)	6-3/4 in x 15-1/4 in x 7/8 in (17 cm x 38.7 cm x 2.2 cm)	
	WEIGHTS:	
Weight with Empty Reservoir	99 lb (44.9 kg)	
Weight with Shipping Carton	131 lb (59.4 kg)	
	parate (dedicated) circuit is recommended for this of be connected to an electrical circuit with other	
	ess that circuit is rated for the additional load.	
115 V models	115 VAC, 12 amps, 50/60 Hz	
230 V models	230 VAC, 6.4 amps, 50/60 Hz	
	230 VAC, 6.4 amps, 50/60 Hz  USE RATINGS:	
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115 VAC	USE RATINGS:  F1—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F2—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F1—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F2—8 amps, 250 V, Fast Acting, 0.205 in	
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115 VAC 230 VAC	F1—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F2—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F1—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F2—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F3—2.5 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)	
115 VAC 230 VAC Safety Valve Setting	F1—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F2—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F1—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F2—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  43 psi (296 kPa)	
115 VAC  230 VAC  Safety Valve Setting Heat Emission	USE RATINGS:  F1—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F2—15 amps, 250 V, Fast Acting, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F1—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F2—8 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F3—2.5 amps, 250 V, Fast Acting, 0.205 in Dia x 0.787 in L (5.20 mm x 20.00 mm)  F3—2.5 amps, 250 V, Time Delay/Slow-Blow, 0.250 in Dia x 1.250 in L (6.35 mm x 31.75 mm)  43 psi (296 kPa)  5275 kJ (5000 BTU) / hr during operation  5.3 liters (1.4 gallons) to Full mark	