

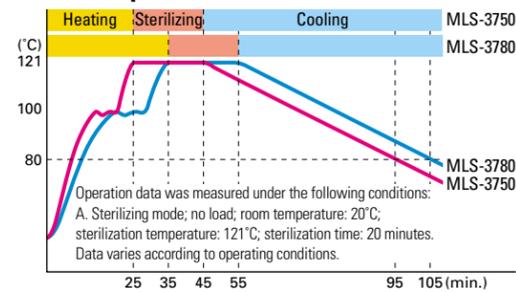
# MLS-3750/MLS-3780

## Specifications

Model No.	MLS-3750	MLS-3780
<b>Power supply</b>	120V single phase, (50-60Hz) 16.7A or above 220V single phase, (50-60Hz) 9.1A or above 230V single phase, (50-60Hz) 8.7A or above	220V single phase, (50-60Hz) 18.2A or above 230V single phase, (50-60Hz) 17.4A or above
<b>Power consumption</b>	2kW	4kW
<b>External dimensions [W x H x D] mm (inch)</b>	600 x 754 x 560 (23.6" x 29.7" x 22.0")	600 x 979 x 560 (23.6" x 38.5" x 22.0")
<b>Weight</b>	63 kg (139 lbs.)	74 kg (163 lbs.)
<b>Chamber dimensions [diameter x depth] mm (inch)</b>	ø370 x 415 (ø14.6" x 16.3")	ø370 x 640 (ø14.6" x 25.2")
<b>Effective chamber height including recess in lid</b>	480mm (18.9")	705mm (27.8")
<b>Effective capacity</b>	50 liters (1.8 cu.ft.)	75 liters (2.6 cu.ft.)
<b>Chamber material</b>	SUS304 (stainless steel)	
<b>Maximum pressure</b>	0.235MPa (2.4kgf/cm <sup>2</sup> ) [34.14 PSI]	
<b>Sterilization temperature</b>	105°C to 135°C	
<b>Culture medium melting temperature</b>	60°C to 100°C	
<b>Keep warm temperature</b>	45°C to 60°C	
<b>Sterilization timer</b>	1 to 250 minutes Instrument sterilization course up to 72 hours	
<b>Melting timer</b>	0 to 250 minutes, 72 hours possible	
<b>Keep warm timer</b>	72 hours delayed, auto off	
<b>Program timer</b>	1 to 99 hours	
<b>Exhaust control</b>	Exhaust valve open temperature setting	
<b>Safety devices</b>	Pressure safety valve, over-temperature limiter, anti-scorch limiter, door interlock, over-pressure limiter, current fuse	
<b>Pressure vessel type</b>	Small-scale pressure vessel	
<b>Accessories included</b>	2 x stainless-steel baskets	3 x stainless-steel baskets

\*Appearance and specifications are subject to change without notice.

## Process operation



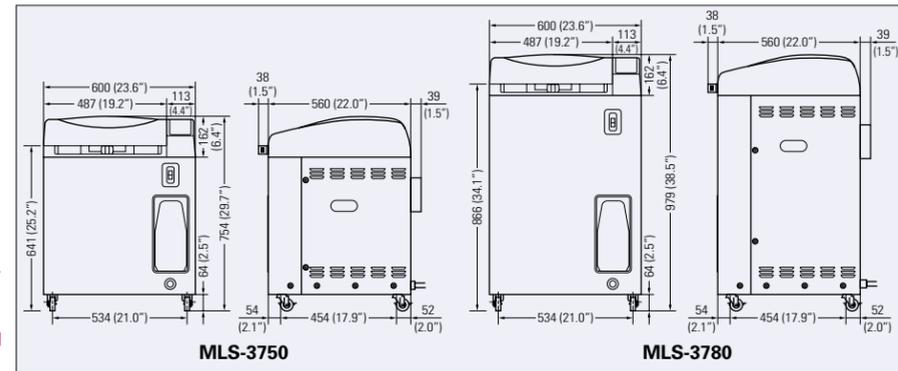
## Comparison of operation frequency per day

(working time per day: 8 hours at 15-minute intervals)

MLS-3750: Operating 4 times a day	105	105	105	105
MLS-3780: Operating 4 times a day	95	95	95	95

\*Operation time varies according to load.

## Dimensions [Unit: mm (inch)]



## Options

	<b>Object Temperature Sensor (MLS-SA)</b> Senses items in autoclave and sets sterilization timer accordingly. Good for slow heating items like resin. Once installed, autoclave control system can be switched between this sensor and main sensors.
	<b>Quick Cool-down Fan (MLS-F12 / MLS-F23)</b> Cooling fan with forced air circulation reduces cooling time by 40%.
	<b>Ambient Sensors (MLS-SVT)</b> Three probes to measure temperature and pressure and related connectors are included.

## Stainless Steel Baskets and Pails

Description	Wire Basket	Perforated Buckets		Solid Buckets	
Model	MLS-RBC	MLS-37PB30	MLS-37PB40	MLS-37C30	MLS-37C40
Applicable Autoclaves	MLS-3750/3780				
<b>Appearance</b>					
<b>Inner Dimensions mm (inch)</b>	ø334 x 215 (ø13.1" x 8.5")	ø330 x 300 (ø13.0" x 11.8")	ø330 x 400 (ø13.0" x 15.7")	ø330 x 300 (ø13.0" x 11.8")	ø330 x 400 (ø13.0" x 15.7")
<b>Features</b>	Stackable with no protrusions on outer surface. Stores four 1-liter flasks. Stores two tube racks (SS18-50).	No protrusions on inner surface to prevent sterilization bag from tearing. Easy-to-hold single handle. Stores a 3-liter flask. 2 buckets stackable.		* Bucket with inner tray also available. Waste materials can be put directly in these cases for sterilization.	

Distributed by:

# SANYO

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# SANYO

## Personal Series In-Lab Autoclaves

## MLS-3750 MLS-3780

Personal-Use Mobile Units  
in Two Sizes with Sterilizing,  
Melting and Warming Functions

**75L**  
(2.6 cu.ft.)

**50L**  
(1.8 cu.ft.)



Sterilization Temperature  
**105°C to 135°C**

MLS-3750

MLS-3780

# Space efficient, convenience minded autoclaves offer sterilization on-demand, where you want, when you want.

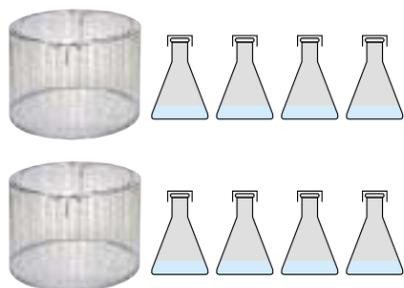
Researchers waste valuable time and energy when limited to using a centralized building autoclave. Installation and maintenance of central autoclaves are not only costly but time consuming. SANYO offers two solutions. The MLS-3780 and MLS-3750 portable autoclaves are designed for individual lab use and can be conveniently wheeled from on lab to another. Model MLS-3750 has a low enough profile to be stored under a lab bench when not in use.

## Compact Design, Swing-top Door for Easy Access

Both SANYO models can be easily installed in minimal space. A swing-up door provides effortless access for loading and unloading test tubes, flasks and lab instruments.



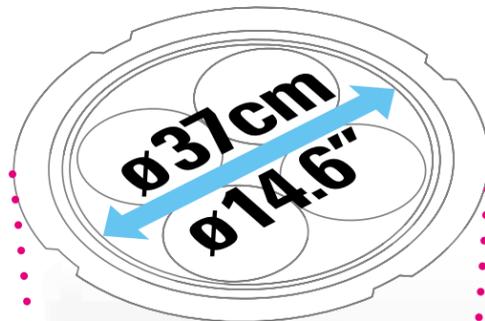
## MLS-3750 Load example



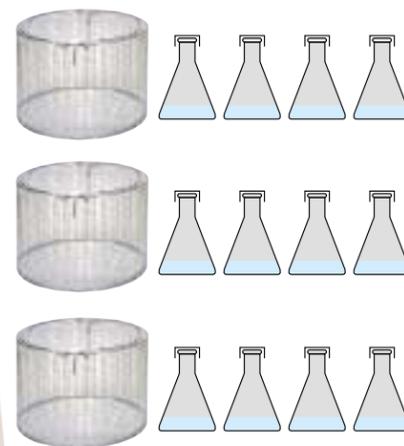
Eight 1000ml flasks

## Surprisingly Large Chamber

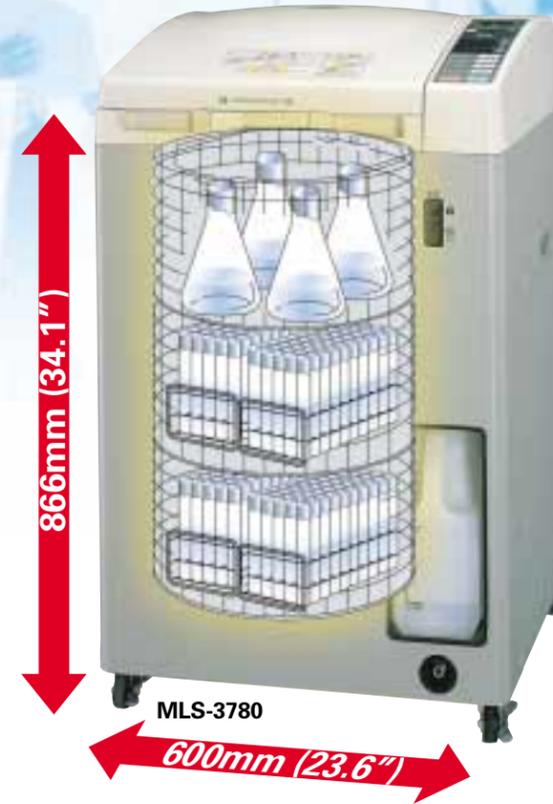
Despite the compact outer dimensions of these autoclaves, they store 8 (MLS-3750) or 12 (MLS-3780) 1,000ml flasks. The MLS-3750 has two baskets, and the larger MLS-3780 has three.



## MLS-3780 Load example



Twelve 1000ml flasks



## Double Interlock, Other Safety Devices



To ensure absolute safety, the door remains locked when pressure or temperature are high. Other safety additions include an insulated swing-up lid, pressure valve, short circuit breaker and scorch-prevention function.

## Plus a Wealth of Other Important Features

### User-friendly design

Heat insulation resin coating, rounded corners, top-mounted control panel, clip-on drainage hose, easy-to-fill-and-empty exhaust tank, lever locking system.



Drainage hose simply clips on and off.

### Microprocessor temperature control

Sterilizing temperature is controlled to within  $\pm 2^{\circ}\text{C}/-0^{\circ}\text{C}$  of the set temperature in the range of  $105^{\circ}\text{C}$  to  $135^{\circ}\text{C}$ .

### Air vent control

Can be set to allow automatic release after sterilizing is completed.

### Numerous options

Object Temperature Sensor, Ambient Sensors, Quick Cool-down Fan, Various Baskets and Buckets (see back page).

## Four Functions with Three Variations Each

These units offer a total of **12 pre-set programs** to choose from on a simple-to-operate control panel with lighted temperature/timer indicators. They also allow for independent programming for users to set their own programs.



### A1-A3 Sterilizing

For water, culture media, reagents and other fluids. After completion and cooling to a selected temp., air is expelled automatically through the exhaust valve.

Sterilizing temp.:  $105^{\circ}\text{C}$  to  $135^{\circ}\text{C}$   
Timer: 1 to 250 min.  
Exhaust temp.:  $0^{\circ}\text{C}$  to  $25^{\circ}\text{C}$ .

### B1-B3 Sterilizing/Keep Warm

After sterilizing culture media, reagents and other liquids, and cooling down naturally to a selected temp., air is expelled automatically from the exhaust valve. High temp. prevents solidifying.

Sterilizing temp.:  $105^{\circ}\text{C}$  to  $135^{\circ}\text{C}$   
Timer: 1 to 250 min.  
Exhaust temp.:  $0^{\circ}\text{C}$  to  $25^{\circ}\text{C}$   
Incubation temp.:  $45^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ .

### C1-C3 Melting/Keep Warm

To melt or keep culture media at a fixed temp. (This function is not for sterilizing but prevents solidifying).

Melting temp.:  $60^{\circ}\text{C}$  to  $100^{\circ}\text{C}$   
Timer: 0 to 250 min., 72 hrs.  
Incubation temp.:  $45^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ .

### D1-D3 Instrument Sterilizing

For flasks, beakers, test tubes, other lab instruments. When completed, the exhaust valve opens and the temp. drops to  $100^{\circ}\text{C}$ . Thus, cool down period can be shortened. Suitable for equipment that can withstand sharp drops in pressure and for sterilizing waste.

Sterilizing temp.:  $105^{\circ}\text{C}$  to  $135^{\circ}\text{C}$   
Timer: 1 to 250 min., 72 hrs.

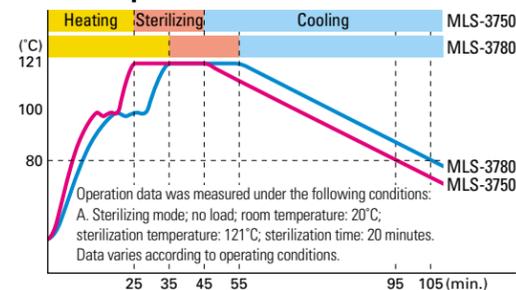
# MLS-3750/MLS-3780

## Specifications

Model No.	MLS-3750	MLS-3780
<b>Power supply</b>	120V single phase, (50–60Hz) 16.7A or above (NEMA L5–30)	230V single phase, (50–60Hz) 17.4A or above (NEMA L6–30)
<b>Power consumption</b>	2kW	4kW
<b>External dimensions [W x H x D] (inch (mm))</b>	23.6" x 29.7" x 22.0" (600 x 754 x 560)	23.6" x 38.5" x 22.0" (600 x 979 x 560)
<b>Weight</b>	63 kg (139 lbs.)	74 kg (163 lbs.)
<b>Chamber dimensions [diameter x depth] (inch (mm))</b>	ø14.6" x 16.3" (ø370 x 415)	ø14.6" x 25.2" (ø370 x 640)
<b>Effective chamber height including recess in lid</b>	18.9" (480mm)	27.8" (705mm)
<b>Effective capacity</b>	1.8 cu.ft. (50 liters)	2.6 cu.ft. (75 liters)
<b>Chamber material</b>	SUS304 (stainless steel)	
<b>Maximum pressure</b>	34.14 PSI [0.235MPa (2.4kgf/cm <sup>2</sup> )]	
<b>Sterilization temperature</b>	105°C to 135°C	
<b>Culture medium melting temperature</b>	60°C to 100°C	
<b>Keep warm temperature</b>	45°C to 60°C	
<b>Sterilization timer</b>	1 to 250 minutes Instrument sterilization course up to 72 hours	
<b>Melting timer</b>	0 to 250 minutes, 72 hours possible	
<b>Keep warm timer</b>	72 hours delayed, auto off	
<b>Program timer</b>	1 to 99 hours	
<b>Exhaust control</b>	Exhaust valve open temperature setting	
<b>Safety devices</b>	Pressure safety valve, over-temperature limiter, anti-scorch limiter, door interlock, over-pressure limiter, current fuse	
<b>Pressure vessel type</b>	Small-scale pressure vessel	
<b>Accessories included</b>	2 x stainless-steel baskets	3 x stainless-steel baskets

\*Appearance and specifications are subject to change without notice.

## Process operation



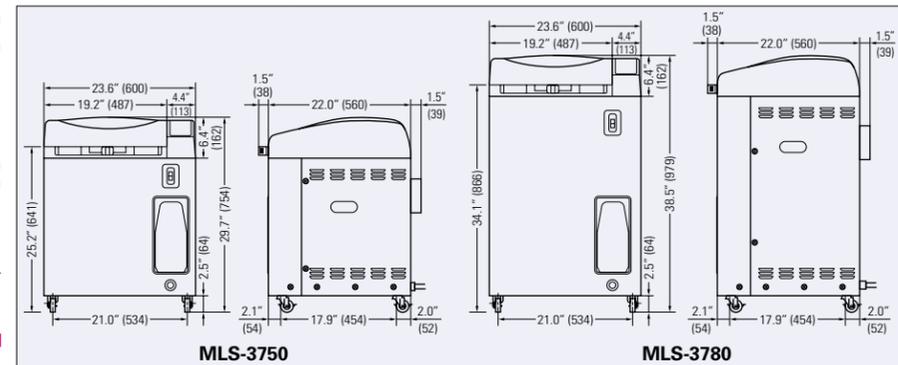
## Comparison of operation frequency per day

(working time per day: 8 hours at 15-minute intervals)

MLS-3750: Operating 4 times a day	105	105	105	105
MLS-3780: Operating 4 times a day	95	95	95	95

\*Operation time varies according to load.

## Dimensions [Unit: inch (mm)]



## Options

- Object Temperature Sensor (MLS-SA)**  
Senses items in autoclave and sets sterilization timer accordingly. Good for slow heating items like resin. Once installed, autoclave control system can be switched between this sensor and main sensors.
- Quick Cool-down Fan (MLS-F12 / MLS-F23)**  
Cooling fan with forced air circulation reduces cooling time by 40%.
- Ambient Sensors (MLS-SVT)**  
Three probes to measure temperature and pressure and related connectors are included.

## Stainless Steel Baskets and Pails

Description	Wire Basket	Perforated Buckets		Solid Buckets	
Model	MLS-RBC	MLS-37PB30	MLS-37PB40	MLS-37C30	MLS-37C40
Applicable Autoclaves	MLS-3750/3780				
<b>Appearance</b>					
<b>Inner Dimensions mm (inch)</b>	ø13.1" x 8.5" (ø334 x 215")	ø13.0" x 11.8" (ø330 x 300")	ø13.0" x 15.7" (ø330 x 400)	ø13.0" x 11.8" (ø330 x 300")	ø13.0" x 15.7" (ø330" x 400")
<b>Features</b>	Stackable with no protrusions on outer surface. Stores four 1-liter flasks. Stores two tube racks (SS18-50).	No protrusions on inner surface to prevent sterilization bag from tearing. Easy-to-hold single handle. Stores a 3-liter flask. 2 buckets stackable.		* Bucket with inner tray also available. Waste materials can be put directly in these cases for sterilization.	

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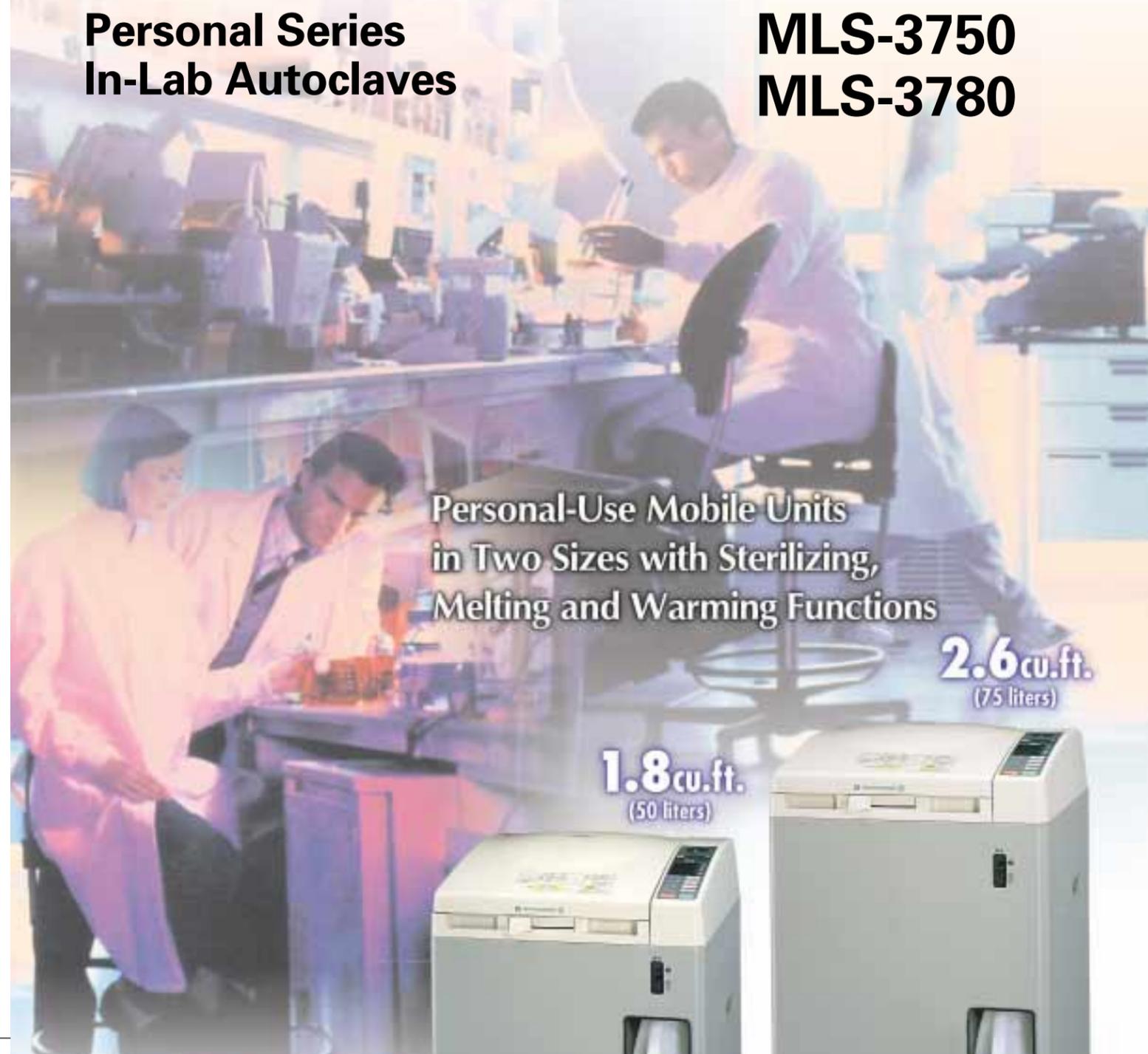


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in Two Sizes with Sterilizing,  
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2.6 cu.ft.  
(75 liters)

1.8 cu.ft.  
(50 liters)



Sterilization Temperature  
**105°C to 135°C**

MLS-3750

MLS-3780

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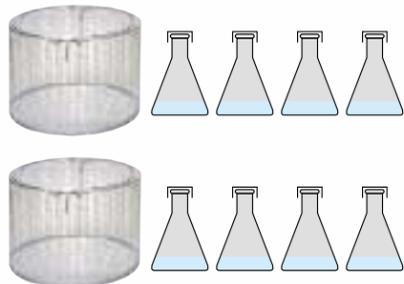
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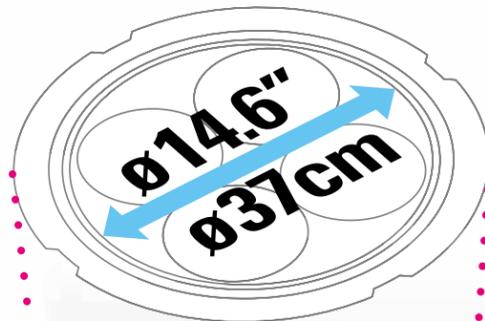
## MLS-3750 Load example



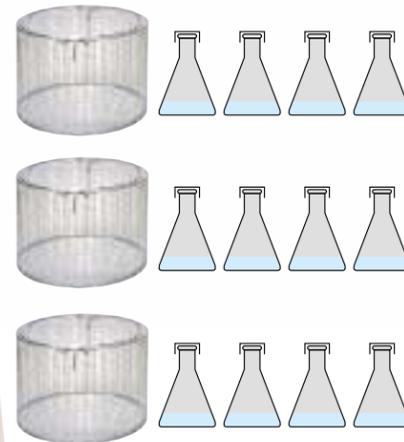
Eight 1000ml flasks

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## MLS-3780 Load example



Twelve 1000ml flasks



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## Plus a Wealth of Other Important Features

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Drainage hose simply clips on and off.

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After sterilizing culture media, reagents and other liquids, and cooling down naturally to a selected temp., air is expelled automatically from the exhaust valve. High temp. prevents solidifying.

Sterilizing temp.: 105°C to 135°C  
Timer: 1 to 250 min.  
Exhaust temp.: 0°C to 25°C  
Incubation temp.: 45°C to 60°C.

### C1-C3 Melting/Keep Warm

To melt or keep culture media at a fixed temp. (This function is not for sterilizing but prevents solidifying).

Melting temp.: 60°C to 100°C  
Timer: 0 to 250 min., 72 hrs.  
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For flasks, beakers, test tubes, other lab instruments. When completed, the exhaust valve opens and the temp. drops to 100°C. Thus, cool down period can be shortened. Suitable for equipment that can withstand sharp drops in pressure and for sterilizing waste.

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