



Comparing Steam & RapidHeat™ Sterilization Annual Operating Cost Comparison

TABLE ONE – 10 CYCLES PER DAY

Cost Description	RapidHeat	Steam
Sterilizer Preventative Maintenance	\$150	\$2,000
Sterilizer Corrective Maintenance	\$150	\$1,000
Sterilization Pouches	\$6,000	\$2,400
Utilities	\$50	\$650
Instrument Replacement	\$0	\$1,500
Total Annual Operating Cost	\$6,350	\$7,550

TABLE TWO – 20 CYCLES PER DAY

Cost Description	RapidHeat	Steam
Sterilizer Preventative Maintenance	\$150	\$4,000
Sterilizer Corrective Maintenance	\$150	\$2,000
Sterilization Pouches	\$12,000	\$4,800
Utilities	\$100	\$1,300
Additional Sterilizer Investment	\$0	\$1,000
Instrument Replacement	\$0	\$3,000
Total Annual Operating Cost	\$12,400	\$16,100

ASSUMPTIONS:

This study compares operating costs of CPAC's RapidHeat™ Pro11 Sterilizer and the operating costs of a popular 11-inch diameter steam autoclave with both processing pouched instrument loads at their default time-temperatures of 21 minutes-375° F. and 52 minutes-270° F. respectively. Table One @ 10 cycles/day compares one of each sterilizer. Table Two @ 20 cycles/day is within the default time/temperature capacity of one Pro11 sterilizer but requires two Steam sterilizers to process the added cycles.

- 1) Preventative Maintenance – Represents the time-cost (\$25.00/hr) of end-user staff performing routine sterilizer maintenance at intervals recommended by manufacturer operating manuals.
- 2) Corrective Maintenance – Represents the cost of engaging independent service contractors or the sterilizer manufacturer to provide technical service and to correct sterilizer failures (costs are averaged over the sterilizer useful life).
- 3) **Sterilization Pouches – Represents the cost of FDA Cleared instrument pouches required by CDC and ADA and the manufacturer's IFU to be used in sterilizing dental instrumentation. For this study dry heat nylon pouches are used in the Pro11 sterilizers and steam sterilization pouches are used in the steam autoclaves.
- 4) Utilities (water/electric power) – Includes actual costs from an independent study comparing the operation of a RapidHeat Pro11 sterilizer with that of popular steam autoclaves of comparable size.
- 5) Additional Sterilizer Investment – Includes the cost of an additional 11-inch diameter steam autoclave at a cost of \$7,000 amortized over an assumed average life of 7 years.
- 6) Instrument Replacement – Represents a conservative cost estimate from a survey of practices of annual instrument replacement costs related to corrosion, pitting, or staining that would have most likely been caused or exacerbated by their use of steam sterilization.

**If a practice would choose to use the Pro11's "Lo-Temp" 320°F – 42-minute cycle for pouched loads, the required nylon pouches required for the "Hi-Temp" 375° F. default cycles could be replaced with steam sterilizer pouches that are compatible with the Pro11. The costs of pouches would then be relatively equal in this comparison; however, the "Lo-Temp" option would also require the use of an additional Pro11 under the Table Two scenario of doubling the load cycles processed in a normal work day.

