Comparing Steam & RapidHeat™ Sterilization
Annual Operating Cost

Table One – Annual Operating Cost @ 10 Cycles Per Day

Cost Description	RH Pro11 @320°F	RH Pro11 @375°F	Midmark M11
Sterilizer Preventative Maintenance	$ 200	$ 200	$2,000
Sterilizer Corrective Maintenance	$ 200	$ 200	$1,000
Sterilization Pouches	$2,900	$6,000	$2,400
Utilities	$ 100	$ 100	$ 700
Instrument Replacement	$ -0-	$ -0-	$1,500
Total Annual Operating Cost	$3,400	$6,500	$7,600

Table Two – Annual Operating Cost @ 15 Cycles Per Day

Cost Description	RH Pro11 @320°F	RH Pro11 @375°F	MidMark M11
Sterilizer Preventative Maintenance	$ 200	$ 200	$ 3,000
Sterilizer Corrective Maintenance	$ 200	$ 200	$ 1,500
Sterilization Pouches	$4,300	$9,000	$ 3,600
Utilities	$ 200	$ 200	$ 1,100
Additional Sterilizer Investment	$ -0-	$ -0-	$ 1,200
Instrument Replacement	$ -0-	$ -0-	$ 2,300
Total Annual Operating Cost	$4,900	$9,600	$12,700

Assumptions:

This study compares the annual (200 working day) operating costs of a RapidHeat™ Pro11 sterilizer and a Midmark M11 steam sterilizer processing pouched instrument loads at their prescribed cycle times: RH Pro11 – 21 minutes @ 375°F and 42 minutes @ 320°F, and Midmark M11 – 52 minutes @ 270°F. Each cycle load contains 120 pouched instruments (10 instruments per pouch).

Table One, at 10 cycles per 8-hour working day, is within the capability of a single RapidHeat and Midmark sterilizer. Table Two, at 15 cycles per day, can be processed in a single RapidHeat Pro11 sterilizer due to its greater tray capacity—4 large trays versus only 2 large and 2 small trays in the M11. To complete 15 cycles in an 8-hour working day, an additional M11 sterilizer operating at 270°F would be required.

1) **Preventative Maintenance—The time cost ($25.00/hr) of end-user staff performing routine sterilizer maintenance at intervals recommended by the manufacturer IFUs.**
2) **Corrective Maintenance—The cost of engaging service contractors or the sterilizer manufacturer to provide technical service correcting sterilizer failures – based on an estimated average from a survey of steam sterilizer service contractors.**
3) **Sterilization Pouches—The cost of FDA-cleared instrument pouches required by the CDC/ADA to sterilize dental instrumentation. Dry-heat nylon pouches are used in the Pro11 sterilizers operating at 375°F cycles, and steam sterilization pouches* are used in the M11 sterilizer and the Pro11 sterilizer when operating at 320°F cycles. In this study, twelve pouches are used for each sterilizer cycle. The steam sterilization annual pouch cost used in the Pro11 operating at 320°F cycles is higher than that of an M11 due to the added expense of applying dry heat indicator sticker labels to the steam sterilizer pouch typically used in steam cycles.**
4) **Utilities – Average annual costs from an independent study of distilled water for steam generation and electrical power.**
5) **Additional Sterilizer Investment—Table Two shows the rounded cost of an additional M11 at $8,500, amortized over an assumed average life of 7 years.**
6) **Instrument Replacement – Represents a conservative annual cost from a survey of practices of their annual instrument replacement costs related to corrosion, pitting, or staining that would have been caused by repeated steam sterilization.**

***If a practice chooses 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 can be replaced with steam sterilizer pouches that have been validated and compatible with the Pro11.**

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