

# Thermablate EAS™ : A New Endometrial Ablation System

## A fully automated, lightweight & portable system for the treatment of menorrhagia.

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### Easy to Use.

Fully automated, portable and user-friendly.

### Short Treatment Time.

High temperature shortens treatment time to 2 min. & 8 secs.

### High Patient Satisfaction.

No general anaesthetic, quick recovery time and less pain.

### Easy to Use

The Thermablate EAS system consists of a light weight hand-held automated treatment control unit (TCU) and a single-use disposable catheter-balloon cartridge. The cartridge contains 28ml of a biocompatible treatment fluid. It is connected to the TCU which heats the fluid to a temperature of 173°C within 8 minutes. This is done during patient preparation.

The user inserts the 6mm, heat shielded, soft-tipped catheter into the uterine cavity to the predetermined depth and initiates treatment with a simple finger trigger. The TCU's pneumatic system transfers the fluid through the catheter to inflate the silicone balloon within the cavity to a set pressure level of 180mm Hg. Every 10 seconds the system performs a depressurization and repressurization cycle to maintain consistent balloon surface contact with the uterine cavity. This also creates uniform temperature of the fluid within the balloon. Treatment concludes after two minutes and eight seconds when the fluid is automatically withdrawn from the balloon and back into the TCU.

The treatment parameters of time, temperature and pressure are all controlled by the Thermablate EAS microprocessors. This is different from other balloon ablation systems which require manual adjustments by the user. An easy to read LCD display on the TCU provides pertinent information and instruction to the user at every step of the procedure. The ease of use, small diameter catheter, short treatment time and minimal anesthesia/analgesia



TECHNICAL INFORMATION	
WEIGHT: TCU/CARTRIDGE	700g/110 g
CATHETER DIAMETER	6 mm
INSERTION LENGTH	up to 12 cm
TEMPERATURE	173°C
TREATMENT PRESSURE	180mmHg - 200mmHg
TREATMENT TIME	2 minutes 8 seconds
INPUT POWER	AC (Universal Adaptor)
BALLOON MATERIAL	Silicone
TREATMENT FORMAT	Global

requirements allows Thermablate EAS to be used in an office or outpatient setting.

### Short Treatment Time

Low temperature balloon endometrial ablation systems (Thermachoice, Cavaterm & Menotreat) use water based fluids that begin to vaporize (at altitude) at temperatures over 90°C and, therefore, have a lower balloon-endometrial interface temperature.

Thermablate EAS uses a glycerin based fluid which can be heated to much higher temperatures and overcomes these thermal barriers. However, the amount of heat energy stored within the uterus at any given time is not much greater than that with water based fluid systems because of glycerin's lower specific heat capacity (2.4 J/g°C compared to 4.2 J/g°C for water). Therefore, for a typical treatment with Thermablate EAS there is 247 J/g present to heat tissue which is not much larger than the 210 J/g available for a water based fluid.

Ultimately, it is the interface temperature that determines the heat transport into the tissue and the outcome of thermal ablation. Thus the higher balloon-endometrial interface temperature of Thermablate EAS drives the critical temperature for tissue destruction to reach the necessary depth in a fraction of the time while still maintaining the safety

offered by low temperature thermal balloon ablation systems

Figure 1 below shows a depth of necrosis of 4-5mm at the fundus and 2-3mm at the internal os and cornual areas.



(Picture: J.Garza-Leal, University Hospital, Monterrey, Mexico)

FIGURE 1

### High Patient Satisfaction

A high level of patient satisfaction has been achieved with Thermablate EAS due to the minimal anaesthetic requirements, low levels of intra and post operative pain<sup>1</sup> and high rate of clinical efficacy. Patient satisfaction rates are over 90% (see figures 2 & 3 below).

A treatment with Thermablate EAS can be performed under local anaesthetic with or without intravenous sedation and post treatment care is typically under one hour with the patient normally returning to her activities the next day.

### Special Access Program

Dr. G. Vilos AAGL 32nd Annual Meeting Presentation

N=49	6 MONTHS
Amenorrhea	20%
Spotting	20%
Hypomenorrhea	37%
Eumenorrhea	16%
Menorrhagia	6%

FIGURE 2

### B.C. Post Market Data

Lion's Gate Hospital & Richmond General Hospital  
September 2002 to March 2004

N=56	6 MONTHS	12 MONTHS
Amenorrhea	10%	20%
Spotting	20%	20%
Hypomenorrhea	40%	60%
Eumenorrhea	20%	-
No Change	10%	-

FIGURE 3

1. Leyland, N., Office Based Global Endometrial Ablation: Feasibility & Outcome for 3 Modalities, Presentation to SOGC July 2004, Edmonton, Canada.

