

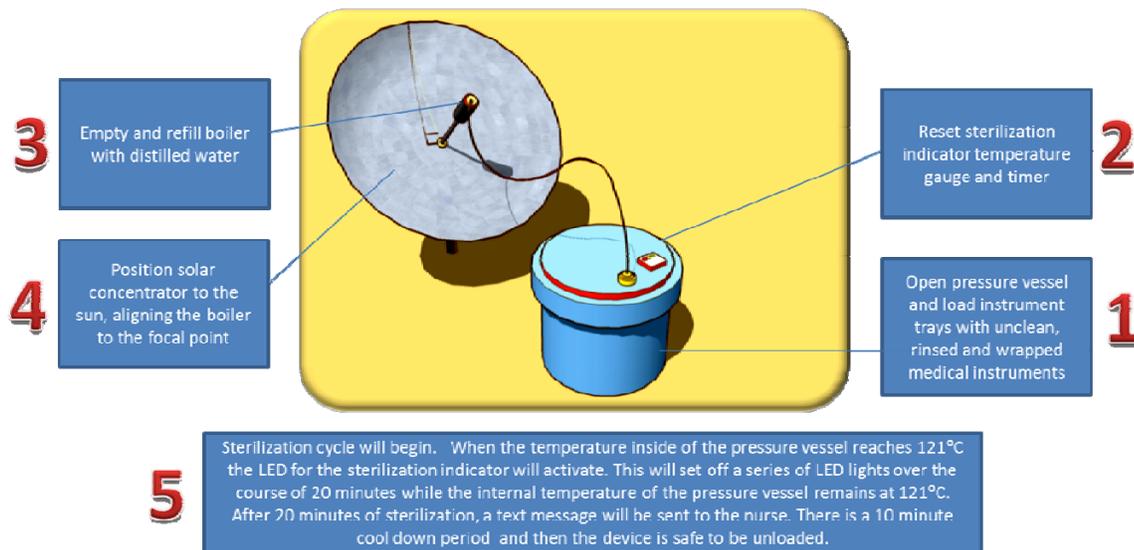
SOLAR AUTOCLAVE

CHALLENGE

- Because they lack the proper equipment, nurses at clinics in the developing world are often faced with the decision to either compromise patient safety by using unsterilized instruments or provide no care at all.
- Every year, 50-60 million people in the developing world suffer wounds. One in five of these patients suffer from post-operation infection, due to, among other causes, the use of improperly sterilized equipment.

How does it work:

SOLARCLAVE system design



Designers: Anna Young, Vincent Ted Liao, Katie Inman, Paul Hlebowitsh, Jose Gomez-Marquez

Manufacturers: Mujeres Solares

Contributors: Solud del Sol, Inc, National Engineering University, Nicaragua Health

Sector: Energy

When: January 2008 – present

Where: 1,200 rural clinics in Nicaragua scalable to 1.2 million clinics worldwide

Cost: \$400 USD

Status: Prototypes will be brought to Nicaragua Fall 2010 for feedback iih.mit.edu solarautoclave@mit.edu solarautoclave@mit.edu

FYI: solarautoclave@mit.edu

Our Story: The concept of a solar-powered autoclave was initiated in 2006 by Dr. Richard Komp, a renewable energy expert, while working with the Mujeres Solares, a cooperative of 30 women, in Nicaragua.

The aim was to create a device design to be manufactured locally by the Mujeres Solares. This research project was then pursued in 2008 by a group of University of Dayton engineering and business students, Lori McIlvaine, Lauren Dokes, Daniel Hensel and Anna Young, for a thesis project and a Business Plan Competition. Upon graduation, this same team formed the non-profit organization, Salud del Sol, Inc., to continue the R&D of the solar autoclave and the local capacity building of the manufacturing group in Nicaragua. The technology has since been developed with support by a team of engineers and designers from the Innovations in International Health program at MIT in Cambridge, MA: Anna Young, Vincent Ted Liao, Katie Inman, Paul Hlebowitsh and Jose Gomez-Marquez, with field development and testing sites in Nicaragua.