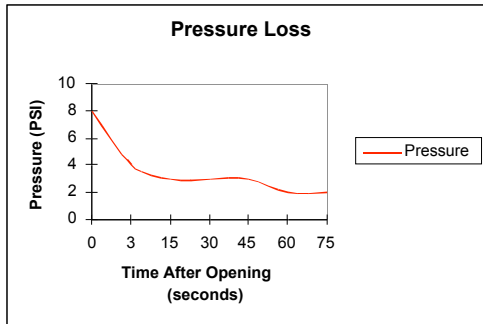
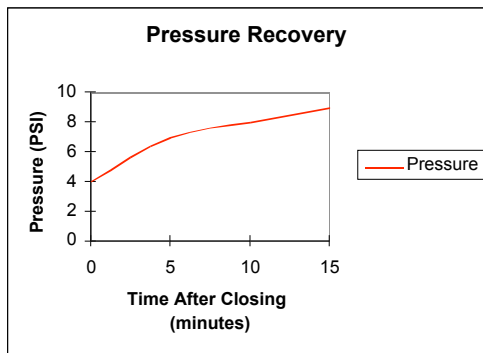


PRODUCT PERFORMANCE

Pressurizes to 14psi when fully insulated.



Full pressure recovery after pump operation in approximately 15 minutes.



Piston pump operates at 3 seconds per cycle while stream feed is open.

Toni Ferreira

Jennifer DeBoer

Meredith Silberstein

Ed Sharp

Jessica Chiafair

Beth Baniszewski

Kyle McKenney

Tom Hennessey

Nicholas Fahey

Moses Heywood

Javier Echenique

Jorge Padilla

Kirk Samaroo

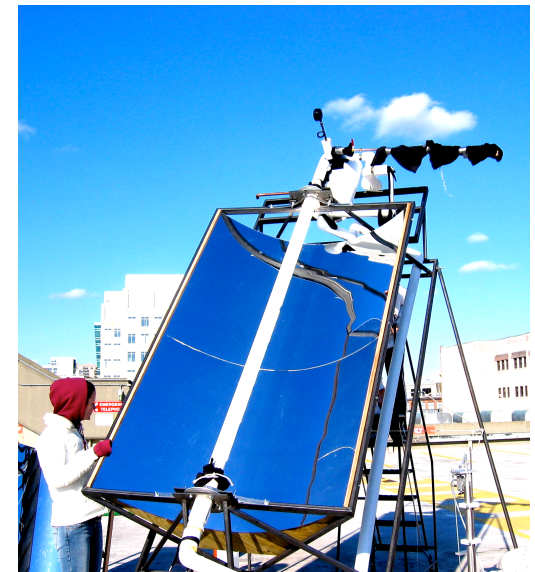
Christina Bonebreak

Laura Nichols

Headley Jacobus

SOL PUMP

Solar Powered Well Pump



THE CUSTOMER

Our market is off-grid regions of developing nations, in particular, Lesotho.

The Bethel Business and Community Development Center is a local Lesotho engineering educational center, which focuses on self sufficiency and the development of alternative power sources.

In 2002 they developed a parabolic trough they use to bake bread in batches of ten. They asked for design improvements to enable other applications.

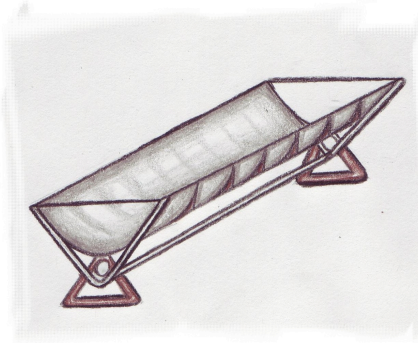


Customer needs:

1. Electricity
2. Refrigeration
3. Pumping
4. Heat
5. Grinding
6. Other

THE SYSTEM

Trough



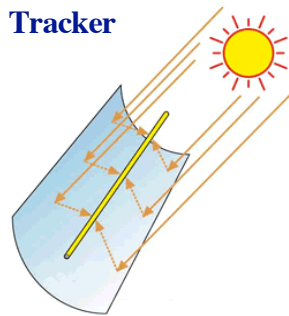
Extruded steel frame

Guide ribs for parabola

Aluminized acrylic sheet

Resistant to strong winds

Tracker



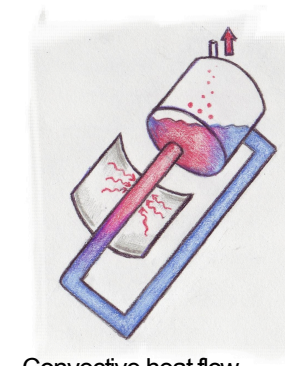
One axis closed loop tracking

Insensitive to passing clouds

Automatic reset at end of day

Vertical angle manually adjustable

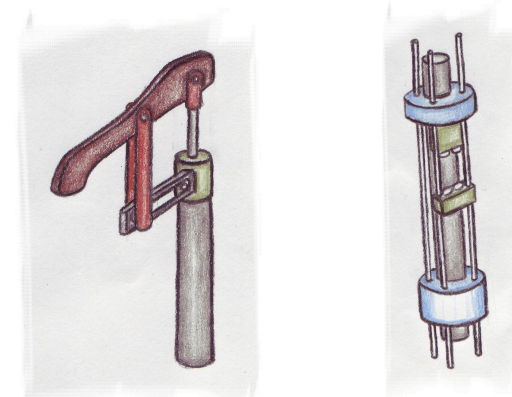
Boiler



Convective heat flow

Automatic Refilling

Pump



Pneumatic cylinder power stroke from steam condensation

Connects to simple farmers' pump

Familiar technology

Detachable for manual pumping