

EDUCACIÓN ALTERNATIVA – ENERGÍA RENOVABLE – JUSTICIA SOCIAL

CEDESOL Review of Prakti Double Pot Wood Stove

On Loan from:

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Functional Design Review

The Prakti Double Pot Wood Stove is an efficient use of rocket stove technology. While the light-weight, compact design is versatile and user-friendly, CEDESOL has noticed issues with the Prakti design:

1. Pot Size Restriction
 - 1.1. Cooking surface does not allow for larger pot size.
2. Seam Gaps
 - 2.1. During operation smoke escapes from the seam where the combustion chamber and stove surface connect.
3. Hot Stove Exterior
 - 3.1. Although the interior stove walls are insulated the exterior gets hot. This is a potential hazard for the user and children.
4. Combustion Chamber Length
 - 4.1. The combustion chamber requires small pieces of wood to be used or the user to monitor the burning of large wood protruding from the combustion chamber. If large pieces of wood are used the stove must be placed on a flat surface to support the wood. If this is not done, the large pieces of wood will burn and fall out of the combustion chamber – a hazard.



Figure 1. Prakti Double Pot Wood Stove design has design issues.

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Additionally, CEDESOL has noticed qualities we would like to include in the design constraints of a new stove:

1. Stainless Steel Combustion Chamber
 - 1.1. Currently CEDESOL uses refractory bricks for the combustion chamber but has had issues with bricks cracking. We would like to adopt the stainless steel combustion chamber for the properties of steel and non-corrosiveness. Stainless Steel creates a passive film of chromium oxide which blocks oxygen diffusion into the steel.
2. Light-Weight, Compact Design
 - 2.1. CEDESOL would like to decrease the weight of its current stove and develop a system for connecting a double pot stove to make a four pot stove. This design would include an adapter to allow for the chimneys from two stoves to be combined into one chimney.
3. Color Option
 - 3.1. Incorporating a colored stove option creates individuality and ownership for the purchaser.