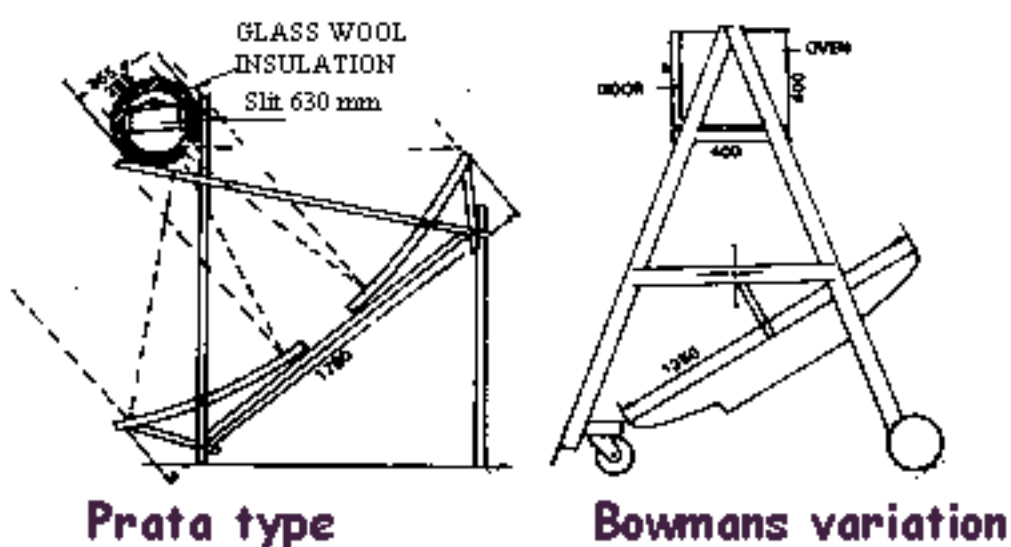


# Cylindro-parabolic solar cookers

The original author of this article is [Dr. Ashok Kundapur](#). Find more of Dr. Kundapur's work on his website: <http://www.solcooker.net/Cindex.htm>

These are an interesting class of concentrators used mostly in water heating applications, but the very first design using such mirrors was that of Prata (1961) (Figure 24). The cylindro-parabolic concentrator focused the rays into an insulated cylindrical box in which two or more cooking vessels could be accommodated (Fraber et al. 1975). Bowman, who built and tested the design, encountered several difficulties (Bowman, Blatt 1978), and he tried to improve upon the design. This resulted in a series of new concepts. The FIT concept No. 1, (Figure 25) is almost similar to Prata's design but it has only a single cylindro-parabolic swinging reflector.



Another improvement development was the incorporation of a bigger and easy-to-use insulated box to house the cooking vessel. Results were slightly better. Reddy (1980) has presented a similar design.

The Edmond Scientific Supplies Company was selling yet another design of this category mainly meant for warming food; it was basically a styrofoam parabola with aluminized polyester (Warenham 1995).

Another very recent cooker presented here has been taken from BBC online. This is being classified by reviewer under this section of Cylindro parabola. He quotes from their site as follows: "The solar sausage sizzler is a bit more tricky to make and watch out for all of those cocktail sticks. However, once built, it makes short work of making a sausage or two (we used Frankfurters sausages). Have a go, and let us know if you succeed". Further details can be obtained from their site.



Once again Mr. Muller's site, mentioned above, has another design to offer in this category. Called as CRADLE Cooker, is coated with 'Eloxated Aluminium' Sheets, houses 13 lit capacity box in the center of the Unit. The unit measures about 110 x 41.5 centimeters. This works out to an area of 0.4565 m<sup>2</sup>. It is supposed to deliver ~450 watts of power capable of boiling 1 liter of water in one hour at Germany.



Solar Grill is another new entry to this site. The source is from <http://www.tammock.ch/en/index.html>. Details are not available, but photo indicates that the device works. The device has a large cylindrical parabolic reflector, with a central chamber for the housing items to be grilled.



As shown by this Youtube clip, cookers similar to the Tammock grill have been successful. As this video shows [\(\[1\] ↗\)](#), in lower latitudes (including the Southern United States), it is not necessary to have an inner cooking chamber or even a lid on the cooker for that matter.

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