

Compactropha[®] – mobile bio fuel production

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Reinartz
Specialised Machines · Presses

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The Dipl. Ing. Gerhard Wellmann GmbH supplies systems for plant and equipment of different production processes within process engineering and assists you in optimising your production. We develop solutions in process technology comprising high-quality equipment plus the related process automation.

A workforce of totally 75 is working with a high level of dedication in the planning, delivery, installation and start-up of new plants, reconstruction and extension projects. We consider ourselves to be development partners of industry and apply our expertise in specific system solutions in the following areas:

- Production and processing of food (milk and beverages, sweets and chocolate)
- Production of drugs and cosmetics

- Regenerative primary products, e.g., vegetable oil
- Project management and engineering services – from the initial layout to execution and translation on the production floor.

In addition to this, the Wellmann GmbH operates as outsource workshop. Experienced installation teams produce system components and equipment of stainless steel for you.

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Compactropha[®]: Mobile bio fuel production



Jatropha: Uncomplicated energy supplier



The Jatropha plant (Barbados nut or, to give it its Latin name, *Jatropha curcas*) grows on eroded soil which is low in nutrients and, therefore, unsuitable for agricultural use.

Consequently, it is not in competition with the cultivation of foodstuffs. Quite the contrary, *Jatropha* is able to serve as a stabilising influence on soil which is prone to erosion. *Jatropha* is relatively undemanding and can endure long periods of drought, temperatures above 40 °C, slight frost and is, on the whole, uncomplicated and adaptable.

The plant belongs to the genus Euphorbiaceae or spurge family, grows very rapidly, contains high oil content (25 % - 35 %) and can supply crude oil for 30 years.

CompacTropa®: Data and facts

CompacTropa® Container 1: Oil extraction

- Processing capacity: 180 up to 400 kilogram
- 20 feet container open side
- Dimensions: length 6058 x width 2438 x height 2150 mm
- Folding wing door, four-sectioned, width 4500 x height 2150 mm
- Colour: RAL5010 blue
- Weight: 9 t
- Power feed with 63A
- 2 Big Bag racks for storage of seed (holding capacity per bag 1.7 m³)
- Metering device for screw press(es)
- Frequency converter
- Screw press(es) mounted on rail system
- Coarse separator
- Press cake outlet including vibrator
- 4 crude oil containers, each with 1000l holding capacity
- Chamber filter system comprising chamber filter press, fine filtration, pump
- Control box
- Container lighting



CompacTropa® Container 2: Power Generator

- Capacity power generator: 50 kVA, optionally 100 kVA
- 20 feet container open side
- Dimensions: length 6058 x width 2438 x height 2150 mm
- Folding wing door, four-sectioned, width 4500 x height 2150 mm
- Colour: RAL5010 blue
- Weight: 6 t
- 1 clean oil tank, holding capacity: 1000l
- Vents for air intake and expulsion
- Container lighting



CompacTropa®: Efficient and kind to the environment

Productive, compact and innovative: the new mobile container pressing unit CompacTropa® is able to process a total of 400 kilogram *Jatropha* seed every hour by means of two integrated presses and is able to directly produce energy on site in a second step. Up to 400 kilowatt of energy is extracted from the hourly yield of 140 litres crude oil – sufficient to supply 24 hours of energy to an African village including all its public buildings such as schools or hospitals, for example.

Up until recently, oil extraction was only possible by exporting the seeds, now, however, oil is not only extracted directly on site but it is also further processed into energy in a second container with the help of a generator. This revolutionary technique is made

possible by directly combining two mobile screw extrusion presses with a generator creating a self-sustaining unit.

CompacTropa® offers a cheap, environmentally friendly and flexible solution which can primarily be used in rural countryside areas of tropical developing and newly industrialised countries wherever *Jatropha* is cultivated and harvested.

A further *Jatropha* project from Maschinenfabrik Reinartz to optimise the production process is being promoted by the German Federal Ministry for Economics and Technology according to a resolution passed by the German Federal Parliament.

